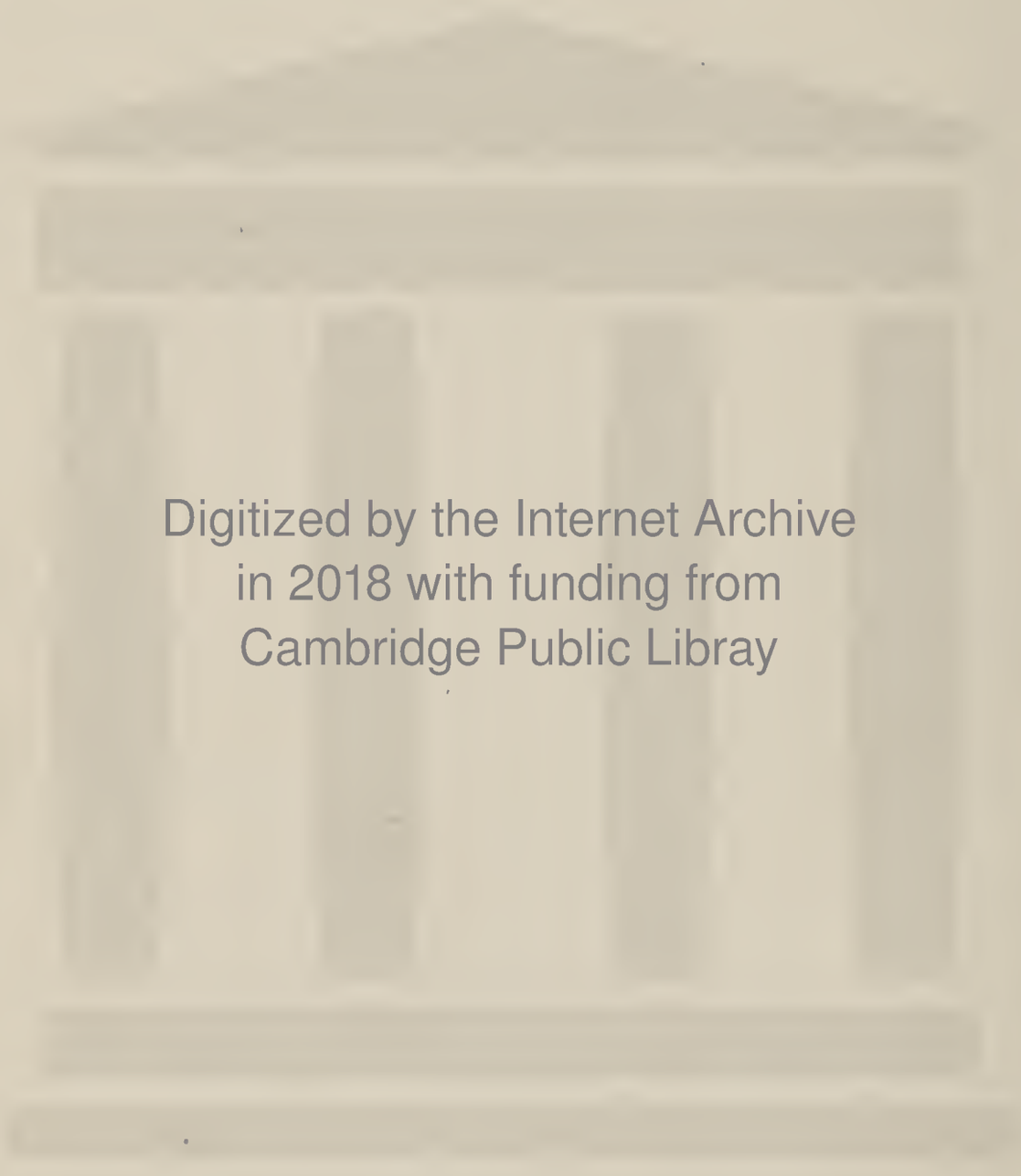

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City of Cambridge.

THE

MAYOR'S ADDRESS

AT THE

ORGANIZATION OF THE CITY GOVERNMENT,

AND THE

ANNUAL REPORTS

MADE TO

THE CITY COUNCIL.

CAMBRIDGE:
Printed at the Riverside Press
1869.

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CITY OF CAMBRIDGE.

In Common Council, January 13, 1869.

ORDERED, That twelve hundred copies of the MAYOR'S INAUGURAL ADDRESS, together with the ANNUAL REPORT OF THE COMMITTEE ON FINANCE, made to the last City Council, with the accompanying documents, and such other documents as have been ordered to be printed by the City Council, be printed, under the direction of the City Clerk, for general distribution.

Adopted and sent up for concurrence.

Attest: J. WARREN COTTON, *Clerk.*

In Board of Aldermen, January 13, 1869.

Concurred.

Attest: JUSTIN A. JACOBS, *City Clerk.*

ADDRESS

OF

HON. CHARLES H. SAUNDERS,

MAYOR.

Gentlemen of the City Council: —

We have assembled this morning to assume the responsibilities, and to discharge the duties intrusted to us by the suffrages of our fellow-citizens, in the administration of the affairs of our city, for the present municipal year.

By the blessing of a kind Providence, we meet under most favorable circumstances. Our country is at peace with all nations, our civil war has ceased, a bountiful harvest has been gathered in, and having just passed through the excitement of a Presidential election, we enter as a nation upon a period of general prosperity, with high hopes for the future, and free from any unusual embarrassment.

The same kind Providence has watched over the interests of our beloved city, and we have as a com-

munity great cause for thankfulness. The past year has been a prosperous one in our rapid growth and our freedom from any great calamity, and it becomes us to render our hearty thanks to the great Giver of all our mercies, for our preservation and continued exemption from the many public trials to which we as a city are ever exposed.

Before calling your attention to the affairs of the city, I desire to avail myself of this opportunity to return to my fellow-citizens my hearty thanks for the unanimity with which they have honored me with a reëlection to the highest office in their gift.

We enter to-day upon the twenty-third year of the corporate existence of our municipality, and having been duly qualified, we are now ready to assume our various duties. These duties require our best services to provide for the demands of our unprecedented thrift. If our present growth is now fostered, the most sanguine anticipations will be realized. To do this, larger appropriations will be required in many of the departments, and, if wisely expended, it will be true economy for the present as well as the future. We are now the second city in population, as also in wealth, in the State, and it devolves upon us to take a broad and liberal view of the future, if we would continue this increase and retain our present position, which our location and territory so preëminently justify. I ask your attention while I briefly review the present condition and wants of the city. I first call your attention to the state of our

FINANCES.

No department of the government affects the success and prosperity of the city so highly as the good management of its finances. We have, I think, always been favored in this respect, and our good condition to-day is in a measure the result of a careful foresight exercised by those who have preceded us, and it behooves us to see that no detriment in this respect is allowed by us the present year. The last City Council, in making up the yearly appropriations, adopted the policy that all expenditures made during the year, including those to be made for three new school-houses and all other permanent improvements (excepting only those made for the extension of the Water Works), should be paid from the tax assessed for the current year; and this has been done. Under the present condition of the finances of the country, and while the attention of Congress is being directed to devise measures for an early return to a specie basis, this is the true policy for us to continue, and I would earnestly recommend you to adopt it before making the appropriations for the year. No other policy is safe or wise for us than that all ordinary expenditures should be promptly met by annual taxation, and the present property of the city pay all the current expenses of the year; and while this will tend to keep us from extravagance or waste, it will leave the treasury, in any event, in a strong and healthy condition.

By the Report of the Committee on Finance, it appears that the total receipts of the year, including balance on hand, December 1st, 1867, were . .		$1,130,231.31
Amount expended for the year ending Dec. 1st, 1868, was		1,035,517.64
Leaving a balance of cash on hand, Dec. 1st, 1868, of		$94,713.67
Amount of balance on hand, Dec. 1st, 1867 . .		78,581.73
Increase of balance on hand over previous year .		$16,131.94
The amount of funded city debt, Dec. 1st, 1868, was	$1,188,400.00	
The amount of funded city debt, Dec. 1st, 1867	1,013,400.00	
Increase of funded city debt for the year	$175,000.00	
To the above debt should be added the amount of State and County tax for 1868, due Dec. 1st and 31st .	$73,672.00	
Balance due Sinking Fund of Water Works	463.38	$74,135.38
From which deduct amount due from the State for Corporation Tax, State Aid, and Military Bounty, Dec. 1st, 1868		46,590.94
Leaving a balance of		$27,544.44
To which add amount of funded debt, Dec. 1st . .		1,188,400.00
Making a total of		$1,215,944.44
From which deduct amount of cash on hand	$94,713.67	
Also amount of Sinking Fund for Water Works in the hands of Treasurer, Dec. 1st . . .	24,463.38	$119,177.05
Making the actual liabilities of the city, Dec. 1st, 1868		$1,096,767.39
Estimated value of property owned by the city, including Water Works, School-houses, etc. . .		1,400,000.00

Of the above amount of funded debt, the sum of $716,400.00 was incurred for the cost of the Water Works to Dec. 1st. (This is perhaps more of a nominal debt than a real one, as it is provided for by a sinking

fund that will pay this amount at maturity, without resort to taxation.)

Although bonds have been issued during the year to the amount of	$175,000.00
Yet as the sum of $26,891.80 was expended in 1867 beyond the amount of bonds issued, and as the entire cost of the Water Works should be represented by bonds, this sum should be deducted from above . .	26,891.80
Leaving available means for extension of works, 1868,	$148,108.20
Amount expended in extension of Water Works for 1868	160,496.38
Being an excess over amount from bonds issued of .	12,388.18
Total cost of Water Works to Dec. 1st, 1868 . .	733,608.04
Amount of Sinking Fund for its redemption, Dec. 1st, 1868	24,463.38
Leaving the present actual cost	$709,144.66

The earnings of the Water Works, after deducting all expense for the care and management of the same, net to the city nearly 7 per cent. on the entire investment, while the works have been built on the bonds of the city, issued at 6 per cent.

The rate of taxation was $13.80 per thousand, subject to a discount of four per cent. if paid on or before October 10th, making the actual rate but $13.25 net, while all the current expenditures of the year, including permanent improvements to an amount of over $50,000, and $12,388.18 for extension of Water Works, were paid from the tax assessed for the year. The valuation of the city for 1868, as appears by the books of the assessors, was $34,093,800.00

To which must be added, the shares in corporations owned by our citizens, which are taxed by the State, estimated at	$2,000,000.00
Total valuation of the city, 1868	$36,093,800.00
Total valuation of the city, 1867	33,853,500.00
Increase of valuation over 1867	$2,240,300.00
Amount raised by taxation, including State and County tax for 1868	$486,886.44

During the year currency bonds of the city have been issued to the amount of $175,000.00, bearing 6

per cent. interest. These have been sold, netting the city a fraction over par, an improvement of two per cent. over the previous year. With a debt so disproportionate to our valuation, and its annual increase, our bonds should, and will in the future, be sought for at a much higher advance. A tract of land containing about 224,000 feet, situated on Sidney Street, has been purchased at a cost of $8,690.95, for the deposit of ashes and other refuse material. Besides its convenience, and the sanitary benefits to be derived, it will prove an excellent investment for the city, an advance of $6,000 having already been offered. The City Council have authorized also the purchase of a lot of land in the Third Ward, near the "Grand Junction Railway," well situated as a depot for gravel for our streets, which can be brought over said railway, when our present supply is exhausted. A large sum is paid every year for the transportation of gravel from the farm to this portion of the city; and this arrangement, if effected, will make a large saving in the future cost of this material. The Water Works are now so nearly completed (excepting the future extension of mains), that a much smaller increase of city debt will be required the present year for this object. Should the large outlay for the Oxford Street sewer be made under the present survey of route, it may be deemed expedient that a debt should be incurred for a portion of the same. But, excepting for these last-named objects, no increase should be made, especially as no portion of the City Debt will become due the present year. While the increase in real and

personal estate the past year was $2,240,300.00, the increase of city debt was but $175,000. The present financial condition of our city is a strong one. All of our indebtedness will be met promptly at maturity; and our city, now the second in rank, will maintain its credit unimpaired in any and every emergency. I would ask your especial attention to the report of the Committee on Finance.

SCHOOLS.

Our system of free and universal education is the glory of our land, and upon its continuance rests the permanency and stability of our free institutions. We are endeavoring to show to the world, that men thus fitted to act intelligently can govern themselves, and that a government thus sustained "by the people and of the people," is not only the strongest, but best adapted to bring happiness and contentment to all of its citizens. We find that from the earliest settlement of our State, provision was made for the school-house and the church. Side by side, down for more than two hundred and thirty years, they have stood, and the result we now see in the fact, that "Massachusetts is preëminently noted for its intelligence, enterprise, and freedom." The past year has been one of marked progress in our schools. The efficient committee having them in charge have endeavored by several important changes to infuse new life and vigor into our system. A lack of accommodations was apparent early in the year in the First, Second, and Fifth Wards, and upon the recommendation of the Committee, it was decided by the City Council

to erect three new school-houses. These have been completed, and are now all occupied, and the entire expense, including land purchased (excepting furniture), provided for in the appropriations for the year. They are thoroughly constructed and conveniently arranged, and reflect much credit upon the Committee on Public Property, under whose direction they were erected. The Gannett Primary School-house was nearly destroyed by fire in February last. This has been remodeled and thoroughly repaired, and is much improved in every respect from the old structure. There was an insurance of $1,200 upon this building.

An appropriation of $1,000 was made for evening schools, and they were opened early in November in each Police District. These schools are intended to give instruction to those who are unable to enjoy the privileges of our day schools, and must tend more than any other agency in our midst to elevate and improve the condition of those who, from any cause, have failed to receive this instruction in their youth. The experiment thus far is a decided success, and their usefulness cannot now be doubted. The number of scholars already in these schools is four hundred and twenty. I recommend that a more liberal appropriation be made for this object the present year.

Some important changes have been made in the High School course. The male teachers have been reduced to three. A Saturday session has been revived and the summer vacation shortened, so that the old four years' course can now be completed in three. This will be a decided

gain to the pupils of both sexes, but especially to the boys, and is a step forward in the right direction. A Superintendent of Schools was elected, and entered upon his duties in July last, and it is already demonstrated that the needs of our large number of schools require the daily supervision of this officer. No additional School-houses will, I think, be required the present year.

The amount expended for the support of our schools the past year was $86,154.35, an increase of $7,771.87 over the preceding one. The number of scholars is now about 6,000, and the schools are generally in a very satisfactory condition. With the exception of the Water Works, the largest appropriation is made for this department, and this expenditure has always been cheerfully met by our citizens. Our schools are the nurseries for the moral and intellectual culture of our children, and no expenditure will bring so sure and liberal a return. I commend to your attention the able report of the School Committee.

STREETS AND SIDEWALKS.

Our streets, I regret to say, are not in their usual good condition. Owing to the great demand the last year for new sewers, the Superintendent has been unable to give that amount of personal attention to the repairs which is required. The superintendence of streets and sewers should be separated, and the Superintendent's whole time be given to the streets and bridges. This will be true economy, and will enable him to keep them in good order. Our present rapid growth shows itself

particularly in this department, and the large number of houses being erected on nearly every street, increases the demand for improved streets and sidewalks. We must meet these demands promptly, and the additional increase of property will amply repay the outlay. The improvement of our streets by good sidewalks, edge-stones, and crossings, should receive the fullest encouragement from the city, and the stone material should be purchased in large quantities at the first cost, and furnished to the public without profit. All stone crossings should be laid and kept clean at the expense of the city. We have a large territory to improve, and these are the great means to bring in a thriving population to occupy it. The widening of Main Street has been completed at a cost of about $5,000, and edge-stones have been set on both sides of said street, making it a beautiful thoroughfare, and one of the best improvements recently made by the city. A slight widening below Douglass Street on Main has also been completed.

I would again call your attention to the territory on the northerly side of Main Street, from the junction of Harvard Street, westward. This is the "Church Street" district of our city, and measures should be taken forthwith to reclaim this unsightly and unhealthy tract. Situated on one of the principal main entrances to our city, and already containing a large population, with no possible drainage, we cannot move in this matter too early. The Grand Junction Railway is now completed, furnishing us the means to bring in the material

cheaply to fill up this region. It can be but a question of time. Why not anticipate this, and bring about this much to be desired improvement immediately? It appears impossible to do this by the private enterprise of the present owners. I recommend for your consideration the expediency of making an early application to the Legislature for power to do this, either on the same general principle of the Act procured by the city of Boston, or for such other power to assess the expense upon the owners or to purchase as may be deemed most proper. This territory, as at present, is entirely unfit for dwelling-houses. It could not fail to be a profitable investment, while in a sanitary point of view, and in its improved appearance, it would work an entire change in this portion of our city. A better class of buildings would be erected, and the whole territory, so eligibly situated, would be occupied where but a portion at present can be. No improvement that we can make will be more generally appreciated or is more to be desired than this.

Late in the month of May last, shade trees were set out on both sides of this portion of Main Street. I regret to say, that owing to the lateness of the season and the scarcity of proper sized trees, but a small portion of them survived the severe drought of the summer. I recommend that the effort be repeated this year, and that special pains be taken during the month of April to procure a supply of good trees suitable for this location, and that they be set out by experienced and responsible gardeners, and warranted for the season. The

expense will not be large, and the general appearance in a few years of this main avenue will fully justify the carrying out of this project. A contract has been made for the regrading of Coolidge Avenue, a sidewalk to be built on the easterly side. This has long been needed, and will be a great convenience to all visiting the cemetery. A portion of this expense will be borne by the Mount Auburn Corporation. I would also suggest for you to consider whether we ought not annually to appropriate a sum to commence paving some of our principal main streets. The amount of appropriation the last year was $40,000. Amount expended $39,988. I recommend that a sum not less than $50,000 be appropriated for streets and sidewalks, and would refer you to the report of the Superintendent for the various recommendations made.

SEWERS.

This is one of the most important subjects that will come before you. Our location is such that our present growth will continue to make large demands for a more perfect system of sewerage. About 7,225 feet of new sewers have been constructed at an expense of $8,409.98. The Oxford Street sewer project has been fully considered by the committee, who were unanimous in the recommendation that it should be built this year. It is estimated that this sewer will cost about $25,000, and it will devolve upon you to decide what proportion of this great outlay shall be assessed upon the abuttors. This sewer will affect an immense territory, and is greatly needed, and should be constructed forthwith if

the route is satisfactory. We must expect the calls for new sewers to increase, and I suggest whether they ought not to be built by contract, under the superintendence of the City Engineer. This will relieve the Superintendent of Streets of this department, and enable him to devote his whole time (as suggested) to the streets. Other cities have adopted this method, and I understand prefer it to the former. This is a subject of vital importance to the present and future health of the city, and a liberal view should be taken in all cases, and a general system adopted. The appropriation for sewers was $12,000. Amount expended, $10,793.64. The report of the Superintendent and that of the City Engineer will give you the details of the year.

BRIDGES.

During the year the bridges on River Street and on Western Avenue have been put in complete repair. Craigie's bridge will require some slight repairs, and West Boston bridge needs to be wholly repaved, and the draw replanked. All the others are in good condition. This draw continues to be a source of great annoyance to the public. It has been slightly repaired, and can be opened in two minutes, but with no power to assist vessels through, there is always great and inexcusable delay. I am fully convinced that two thirds of this delay proceeds from this cause. With or without a new draw, we should have facilities for taking vessels through at all times speedily. An ordinary vessel ought not to occupy more than a minute in passing.

A stationary steam-engine placed upon the pier could perform this service, and also be used for opening and closing the draw. Probably not less than twelve thousand persons pass and repass this bridge daily, and this constant inconvenience so long endured should be remedied at once. The Grand Junction Railway will soon be in operation, and as it crosses all our main streets to Boston, will be liable to cause some additional delays. I recommend that this power be applied immediately and fully tested. We shall need this with any draw that may hereafter be constructed. Should you deem it advisable also to build a new draw, I think it would be a wise measure to close up one of the passages, and build merely a single draw similar to the one on Warren bridge.

We are now compelled for the smallest craft having a mast or a smoke-pipe, to move a hundred tons weight, and create two passages. I can see no possible advantage in this, but a decided loss of power.

This matter affects every citizen, and I cannot too strongly urge you to take early and decisive action. The remedy is a simple one, and should be applied forthwith.

The amount appropriated last year was .	$15,000.00
Amount expended	7,653.10

CEMETERY.

The idea of beautifying and making pleasant the resting places of our departed is an ennobling one, and finds a response in the hearts of all civilized communities. During the year many improvements of a permanent

nature have been carried out by the Commissioners. The grounds have been embellished with trees and shrubs, avenues graded, and new lots laid out, all tending to render our cemetery more pleasant and attractive. A neat and commodious stone lodge has been erected, containing a public room for visitors, an office for the Superintendent, and other conveniences, at a cost of about fifty-one hundred dollars. This building is nearly fire-proof, and has been much needed since the one burned in 1866.

Island Pond, formerly a low, unsightly tract, has been nearly completed, walks have been constructed on the outer edge of the island, and a carriage-way built through the centre, to be connected by a bridge with the opposite shore. The island and pond contain a large area, and when completed, with its irregular banks neatly sodded, will present a fine appearance. An arrangement has been made by which, for a small annual charge to the proprietors, the superintendent assumes the care of the lots for the season. This improves very much the whole appearance of the cemetery, by having the lots kept always in perfect order, and an air of neatness is everywhere visible. Suitable marble tablets have been placed over the grave of each soldier in their public lot (with one exception not yet completed), with their names, dates, etc., and this lot is now in good condition. With the avenue under contract for regrading from Mount Auburn Street to the gateway completed, our citizens will more fully realize the importance of these great improvements.

Amount of receipts for the year	$8,201.00
Amount expended (exclusive of New Lodge) . . .	8,208.83
Number of lots now graded and ready for sale . . .	78
These are valued at about	$13,000.00
Number of interments made during the year . . .	321
Whole number of interments made in the Cemetery from June, 1854, to December 1st, 1868 (including removals from the Second Ward)	5,800

The old burial ground in the First Ward (so long in a neglected condition) has, I am happy to say, the past year (under the direction of the Committee on Public Property) been put in good order. The ground has been cleared of a large amount of unsightly and decayed shrubbery. The grave-stones have been righted, walls of tombs repaired, and walks laid out over the same, giving general satisfaction.

SOLDIERS' MONUMENT.

Nearly four years have passed since the din of war and clash of arms have ceased. The soldiers of the Republic had then triumphed. The government of our fathers had been preserved, Liberty and Union were secured, and the proud flag of the rebellion had gone down forever. Our gallant soldiers, everywhere victorious, returned to the paths of peace, while the great army of martyrs who rallied around the "Old Flag," and held it aloft upon every battle-field, sealing their devotion with their lives, that we and our children might enjoy this glorious heritage, returned not — "Their bones lie mingled with the soil of every battle-field, and there they will remain forever." A year ago it was my privilege to call the attention of the City Council to the

subject of a "Soldiers' Monument," and I would to-day reiterate all that I then said. No argument is now needed, for I trust we all desire, and our constituents expect us, to perpetuate in some enduring form our gratitude to those brave men.

A special committee of the last City Council, to whom was referred this subject, having carefully considered the same, reported that, in their opinion, a "Soldiers' Monument" should be erected by the city, and that the Flag-staff Common, in the First Ward, was the most suitable spot for its erection. I most heartily concur in this opinion, and recommend that this report, accepted by the last City Council, be referred to a special committee to consider and report, and also with power to procure plans and estimates for a monument of granite that shall transmit to those who will come after us the names and sacrifices of those heroes of our time, who, at their country's call, cheerfully went forth to victory and death. The sacrifice has been made, and the goal is won. It is ours to enjoy, ours to preserve, ours to transmit. I trust this subject will receive your immediate attention, and that this year will witness the completion of this work. I have full confidence that your action will be such as shall redound to the credit of our city, and to the cause which this will commemorate.

WATER WORKS.

No city is complete in a sanitary point of view without a good system of Water Works. During the year a large amount of labor has been performed towards

the construction of the works. The new reservoir has been completed, the old one thoroughly repaired, and its capacity increased. A heavy retaining wall has been built for the protection of the new reservoir, the standpipe finished and in use for about four months, supplying during this period the whole city, independently of either reservoir, affording a supply to the highest localities, and is a complete success. A new brick engine-house has been erected, and the new pump, costing upwards of $40,000, placed therein, thus affording ample pumping facilities for any emergency. The present daily consumption is about 1,700,000 gallons. About six and a half miles of mains of various sizes have been laid the past year, and we now have a total of about forty-three miles laid and in use

Amount expended for the works during the year .	$160,496.38
Income from all sources for 1868	79,434.56
Income from water rates (only) 1868 . . .	63,747.42
Income from water rates (only) 1867 . . .	52,733.62
Increase of income over 1867	$11,013.80
Net income from Water Works, 1868, over expenses of care, etc.	$47,238.57

Nothing, I think, has contributed more to our recent growth than the supply of water afforded to the various manufacturing interests of our city, as well as to the new dwellings in all portions of our territory, and this will continue for the future. We now have a complete system of water works extending over the larger part of our city, at a very moderate cost, the income of which already yields about 7 per cent. on the entire investment.

I am not aware of any other water works within our State that will show so favorable a result. We have every reason to feel gratified at the prosperous condition of our Works, and I would refer you to the interesting reports of the Commissioners, the Superintendent, and the Registrar for full details.

AMENDMENTS TO THE CITY CHARTER.

It is not to be expected that our city charter, adopted upwards of twenty years ago, should meet all the requirements of our present growing municipality, and from the experience of the past year I submit for your consideration the expediency of the following amendments, namely, —

1st. The constant change of a majority of the members of either branch of the City Council annually is always attended with much inconvenience, as well as being detrimental to the best interests of the city, and it would be desirable, I think, that at least the Board of Aldermen, if not both branches, should be elected for two years, one half to be chosen in each year, while the other half would hold over; thus continuing the same general policy in matters of finance, as well as retaining the experience of the members of the previous year in the various interests of the city.

2d. Our city is now divided into five wards, and nothing in the charter forbids all of the Aldermen being chosen from a single ward. It was evidently the intention that two should be chosen from each ward. An amendment requiring this would give, I think, better satisfaction to our citizens.

3d. The annual expenditures of the City Council now amount to upwards of $600,000, and I would suggest whether it would not be desirable that the Mayor should possess the veto power. While it could work no injury, it might be a safe precaution in our future increased expenditures, and could only affect those measures which would fail to command a two-thirds vote. The charter of the city of Boston has always, I believe, contained this provision.

4th. The Mayor is chairman, ex-officio, of the School Committee, and of the Board of Overseers of the Poor, but has no vote in either. It could not have been the intention that he should be merely the presiding officer. Although perfectly conversant with both departments, and with the constant liability of a tie vote, he is not entitled by the charter to give the casting vote. I can see no objection to an amendment allowing this, and it would seem proper that this power should be granted.

PUBLIC COMMONS.

I would again call attention to the present condition of our Public Squares or Commons, and the importance of bestowing more care upon them. We have it in our power, without great expense, to make them attractive, and thus contribute to the health, comfort, and enjoyment of our citizens. We have received them all, through the generosity of private individuals and the early proprietors of the town, for this purpose. The trees should be well cared for, and the walks kept in good order. Property on all public squares is much increased when

this is done, besides being ornamental to the city. This will be better understood by referring to the action of the city of Boston on their several parks at the southerly portion of the city. A wise foresight reserved these, and being tastefully laid out and improved, these localities were immediately sought for, and became among the most desirable sites for the erection of private dwellings. The former burial ground in the Second Ward is now being laid out for a park, agreeably to an Act of the Legislature. A contract has been made for the grading and laying out of walks, according to a plan made by the City Engineer, to be inclosed by a substantial iron fence, the whole to be completed early the present season. This will be a great public improvement. A park is also much needed in the Third Ward, and I would call your attention to the expediency of considering this subject while desirable locations may be obtained at reasonable cost.

POLICE.

The safety of life, property, and the preservation of the peace, as well as the execution of the laws, depend upon an efficient and well-disciplined corps of police. It should be the aim of its members, by constant vigilance, to secure to our citizens full protection from injury in every form, and to labor for the prevention as well as the punishment of crime. Our present force consists of thirty-one members, including the Chief, and is in excellent condition. An increase of the force is now recommended by the Chief. The beats are enlarged, from the fact that an officer in each district is now required

to remain during the night at the police stations, to render any service that may be needed by the citizens. This is a wise arrangement, and officers have been detailed for this duty without any increase of the force. In May last, a neat and serviceable uniform was adopted, and our police officers are now distinguishable from the citizens on all occasions, and this has also increased their efficiency.

Our city has been fortunate the past year in its exemption from scenes of tumult and disorder, and peace and good order have prevailed throughout our community. The comfort and welfare of our citizens depend more upon this department than is generally supposed, and the faithful services of the police are not always fully appreciated. The amount expended for the year was $36,507.63. More than fifty per cent. of all the arrests made during the year were for the crime of drunkenness.

FIRE DEPARTMENT.

This organization, so essential to the preservation of the property of the city, is under good discipline, and in a very satisfactory condition. To keep pace with the large increase of new buildings, the City Council have ordered the purchase of an additional steamer for the Fifth Ward, and a commodious brick building is now being erected, adapted for an engine-house, ward-room, and police-station. This arrangement will be a convenient one, and will also supply a want long felt, of a suitable ward-room for this part of the city. Our loss by fire has been small.

The amount of property destroyed by fire, during the year, was	$29,540.00
Amount of insurance upon the same	13,390.00
Leaving the net loss	$16,150.00
The number of alarms was	35
The number of fires	29

The apparatus is in good condition, steamers No. 1 and 2 having been thoroughly repaired. I think, however, we are deficient in new hose. We should guard against any want in this particular by keeping always on hand a liberal supply.

A hose company and apparatus seems to be needed in the Second District; and I would suggest the expediency of substituting this for the hand engine No. 4, making our department to consist entirely of steamers. We are liable in this most populous district to suffer seriously from this defect.

The great want in this department is a more prompt and systematic mode of alarm. I am well satisfied that a fire-alarm telegraph attached to the several engine-houses and police-stations, similar to that in use in many cities much larger than ours, would remedy this difficulty, and be a great auxiliary to the efficiency of this, as well as the police department, and best adapted to our situation, unless we are prepared to make a large outlay. Our territory is of great length, and the distance between our bells makes it impossible to give an alarm by merely striking them, unless a large number of new bells are added. I am convinced that no alarm will be sufficient for our city at present without the ringing of the bells,

even with a telegraph. If the plan referred to should be adopted, it would prove simple in its construction and maintenance, and adequate to our present wants, and could be extended in the future with no great additional expense. Although we have been remarkably fortunate the past year, we must not fail to keep this department in its most efficient condition. Amount expended for the year, $27,624.51. I would call your especial attention to the report of the Chief Engineer for the recommendations therein contained.

ALMSHOUSE.

The duty of providing for the care and wants of our poor is one which we should at all times cheerfully perform, and the example of the "Great Master" should ever encourage us to labor earnestly to relieve and mitigate their sufferings. The past year has been one of remarkable experience to our establishment. On the fourth day of April last, while in the discharge of his duties, the faithful Warden was suddenly and without warning struck down by one of the inmates at work in the ledge. Every attention was rendered him by the Board of Overseers and friends, but in vain. He survived the assault about three weeks, and died April twenty-fifth. In June last the Overseers made choice of a warden and matron who entered upon their duties July 1st. It was found necessary to refurnish a portion of the warden's department, and to make extensive repairs. The building has been painted throughout and put in complete order. No repairs of consequence, excepting

these, have been made since its erection in 1852, and the house is now in excellent condition. By the report of the Overseers, the average number of inmates was 76, being 12 less than the previous year.

Amount expended for the year, including repairs and other extra expenses		$31,210.89
Amount of proceeds from ledge and farm	$16,946.61	
Amount of bills due but uncollected . .	4,034.77	20,981.38
Making the actual expense over income for the year		$10,229.51

We are supporting too large an establishment for our present wants and number of inmates. Some encouragement was given by a party in March last to purchase the building and ten acres of land, but nothing decisive came from it. The receipts have been $6,020.15 more than the previous year, and the expenses have increased $5,392.66, leaving a net gain in receipts of $917.60. The amount expended for repairs and extra expenses of the year (included above) was upwards of $2,000. I see no advantage in our working the ledge, and I recommend that it be leased the coming season, believing that individual enterprise is better adapted to make it profitable. New rules have been adopted for the Warden, and he is now required to keep an account of each department separately, and report monthly their condition. With all due economy the amount required to support this building and farm must always be large. A smaller house, with a few acres of land, would reduce by one half the annual cost of maintaining this establishment, and I again recommend its sale whenever a favorable opportunity offers.

CONCLUSION.

Gentlemen of the City Council, —

I have thus briefly laid before you the present condition and needs of the various departments of the city. It is our privilege to be placed in these offices of responsibility and trust at an interesting period in its history, and at an era of its greatest prosperity. It is for us to provide for the various demands which our rapid growth will require, liberally yet judiciously. Our population is now estimated at not less than 36,000, and our valuation exceeds $36,000,000. The number of new dwelling houses erected the past year is five hundred and thirty-one; stores, and other buildings, sixty-four; making a total of five hundred and ninety-five new structures. We should also bear in mind that our city is yet in its infancy, and that our present population will be more than doubled within twenty-five years. With these facts before us, while I would urge you to a careful supervision of all the expenditures (the responsibility of which rests upon you alone), and to avoid every species of extravagance, I would not have you neglect or hesitate to advance any of our material interests. Let us, however, avoid all expenditures of money for doubtful and untried projects, and observe a wise economy in our appropriations, keeping in view the burdens of taxation which still bear so heavily upon the people. I would also commend to your careful attention the various reports made by the city officers, trusting you will give them due consideration.

In again assuming the responsibilities of this honorable position, it will be my earnest endeavor at all times to perform its duties, faithfully and impartially. Let me cherish the hope that a spirit of cordial coöperation and harmony may pervade all our councils. May we be united in all our endeavors for the public good, and go forth to-day confidently to those official duties that shall minister to the highest prosperity of our city under the blessing and guidance of that Great Being who is the source of all wisdom and strength.

CHARLES H. SAUNDERS.

REPORT

OF

THE COMMITTEE ON FINANCE.

The Joint Standing Committee on Finance respectfully submit their Annual Report to the City Council for the financial year ending November 30, 1868.

The whole amount of appropriations for the year was $678,-834.20. The whole amount expended has been $656,360.45, including $160,496.38 for the extension of the Water Works. The amount appropriated for extension of the Water Works was $148,109.20, and this sum was intended to balance exactly the amount of bonds issued for the Water Works. As the City has expended $12,387.18 above this amount, it will be necessary, in order to carry out the plan approved by this Committee of making the amount of Water Bonds correspond exactly with the cost of the Water Works, that bonds should be issued by the City for this amount, in addition to whatever sum may be appropriated by the next City Council for the extension of the Works.

The Committee are gratified to find that the estimated receipts for the year have not fallen short, but in several cases, as in that of the Almshouse, the Cemetery, and the Water Works, they have considerably exceeded their estimates. The whole of the current expenses of the year have been paid, and some $24,000 have been expended for new School-houses ; a tract of land has also been purchased for the sum of $8,690.95, of which a part has been sold for $1,490.95, making the cost of what is retained by the City $7,200. The two lots of land for new School-houses on Putnam Street and on Reed Street have also been paid for, costing $2,000. A new Lodge has also been built at the Cemetery, at a cost of about $5,100.

The whole amount of receipts into the Treasury for the year (exclusive of Temporary Loans), was	$820,529.23
Balance in Treasury, December 1, 1867 . .	78,581.73
	$899,110.96
The total amount expended was	804,397.29
Balance, December 1, 1868	$94,713.67

The sum of $836.16 has been paid into the Sinking Fund of the Water Works, besides the interest on the Fund in the hands of the Treasurer. The total amount of the Fund on June 30th, 1868, was $24,463.38, of which $24,000 have been invested in Water Bonds by the Trustees of the Fund.

The amount of the permanent City Debt on the 1st of December, 1867, exclusive of the Dowse Institute and Sanders' Temperance Funds, was	$993,400.00
Water Bonds have been issued during the year to the amount of	175,000.00
	$1,168,400.00
From which deduct the amount of the Sinking Fund for Water Works	24,463.38
Making total permanent debt, December 1, 1868 .	$1,143,936.62

The liabilities of the Treasury on the 1st of December, 1868, are as follows, viz. : —

State and County Tax for 1867	$73,672.01
Amount due Sinking Fund of Water Works (temporary loan)	463.38
Interest due and not paid	1,228.50
Bills approved but not paid	727.00
Percentage on Liquor Sales due Commonwealth .	205.22
Bank Tax due Commonwealth	580.34
	$76,876.45

To offset which we have the following items, viz.: —

Balance in the Treasury	$94,713.67
Due from State under Corporation Tax Act	22,933.44
Due from State, Militia Bounty	1,657.50
Due from State, Aid to Soldiers	41,000.00
Due from County, Rent of Police Court Room	600.00
Due from County Commissioners, Licenses	2,750.00
Drain and Sidewalk Assessments	7,659.75
Taxes uncollected, about	43,000.00
Total	$214,314.36
Deduct Liabilities	76,876.45
	$137,437.91
December 1, 1867, the amount of assets over liabilities of the Treasury was	62,283.37
Balance, showing gain to the Treasury during the year	$75,154.54

The following additions have been made to the permanent property of the City during the year: —

For new School-houses and Land		$26,512.75
Land purchased in Ward IV.	$8,690.95	
Less amount of lot sold	1,490.95	
		7,200.00
Amount paid for Extension of Water Works		160,496.38
Amount paid Sinking Fund of Water Works		836.16
New Lodge at Cemetery		5,100.00
		$200,145.29
Deduct for amount of Water Bonds issued		175,000.00
		$25,145.29

This amount added to the above balance of gain to the Treasury shows the actual gain to the City in assets and permanent property during the year to be $100,299.88.

The taxes assessed for the year 1868 were —

For City purposes	$413,214.43	
For State tax	50,420.00	
For County tax	23,252.01	
		$486,886.44
Of the above tax the amount collected is	$430,282.07	
Discounted	17,323.42	
Abated	7,832.03	
		455,437.52
Balance uncollected		$31,448.92
Of the tax of 1867, there remained uncollected, December 1, 1867		$44,622.67
Of that amount has been collected	$34,877.10	
Discounted	22.07	
Abated	2,831.02	
		37,730.19
Balance uncollected		$6,892.48
Of the tax of 1866, there remained uncollected, December 1, 1867		$5,142.62
Of that amount has been collected	$1,878.11	
Abated	138.12	
		2,016.23
Balance uncollected		$3,126.39
Of the tax of 1865, there remained uncollected, December 1, 1867		$2,689.12
Of that amount has been collected	$20.00	
Abated	1,812.72	
		1,832.72
Balance uncollected		$856.40

Of the taxes of the years 1861, 1862, 1863, and 1864, there remained uncollected, December 1st, 1867		$407.25
Of that amount there has been abated		385.25
Balance uncollected		$22.00
The amount of assessments to defray the expense of constructing sidewalks committed to the Treasurer in 1868, was		$141.63
All of which remains uncollected.		
The amount of Drain Assessments uncollected, December 1, 1867, was		$3,574.78
Of that amount there has been collected	$2,982.93	
Abated	.84	
		2;983.77
Balance uncollected		$591.01

The valuation of estates, as appears by the books of the Assessors, exclusive of the property of citizens in certain corporations now taxed by the State, amounting to about $2,000,000, is as follows, viz. : —

District.	Wards.	Polls.	Real Estate.	Personal Estate.	Total.
I.	1	1,313	$6,784,200	$4,631,600	$11,415,800
II.	2	2,157	5,694,800	3,187,600	8,882,400
III.	3	2,039	3,648,100	1,693,400	5,341,500
II.	4	1,948	3,788,800	1,292,900	5,081,700
I.	5	739	2,449,000	923,400	3,372,400
Total . .		8,196	$22,364,900	$11,728,900	$34,093,800

The rate of taxation was $13.80 per thousand, subject to the usual discount of four per cent., if paid on or before the 10th of October.

The books and accounts of the Treasurer have been examined by a sub-committee, whose report is hereto appended.

All of which is respectfully submitted.

CHAS. H. SAUNDERS,
SAMUEL B. RINDGE,
M. T. BIGELOW,
HENRY W. MUZZEY,
SAMUEL SNOW,
HORATIO LOCKE,
L. S. LEARNED,
JOSEPH CHILD, JR.,
GEO. W. T. RILEY,

Committee on Finance.

REPORT

CONCERNING

THE ACCOUNTS OF THE TREASURER.

In Committee on Finance, *December* 30, 1868.

The Sub-committee appointed by the Committee on Finance to examine the accounts of the City Treasurer for the financial year ending November 30, 1868, have attended to the duty, and submit the following

REPORT:

Your Committee find that the accounts of the City Treasurer have been correctly kept, and that he has satisfactory vouchers for all payments made by him, according to the schedule herewith submitted, showing a balance in his hands of ninety-four thousand seven hundred and thirteen dollars and sixty-seven cents ($94,-713.67) on the first day of December, 1868.

Your Committee would also state that bonds of the Cambridge Water Works to the amount of two thousand dollars ($2,000) still remain in the hands of the Treasurer more than the balance of the account shows the City entitled to.

Respectfully submitted,

SAMUEL B. RINDGE,
JOSEPH CHILD, Jr.,
SAMUEL SNOW,
} *Sub-committee.*

SCHEDULE OF EXPENDITURES

FOR

THE FINANCIAL YEAR ENDING NOVEMBER 30, 1868.

For Instruction in Public Schools.

Salaries of Teachers			$84,464.97
Appropriation . .	$84,000.00		
Additional Appropriation	1,550.00		
		$85,550.00	
Amount of Expenses . .		84.464.97	
Balance unexpended . .		$1,085.03	

For Scientific Department of High School.

Chemicals and apparatus . . .		$193.18	
Repairs of apparatus		8.00	
Organ and tuning forks . . .		65.00	
			$266.18
Appropriation . . .	$200.00		
Additional Appropriation	66.18		
		$266.18	
Amount of Expenses . . .		266.18	

For Text-Books for High School.

Books			$96.00
Appropriation		$100.00	
Amount of Expenses . . .		96.00	
Balance unexpended . . .		$4.00	

For Evening Schools for Adults.

Appropriation		$1,000.00
Balance unexpended . .		1,000.00

For Hopkins Fund.

Books			$199.20
Appropriation		$800.00	
Amount of Expenses	$199.20		
Transferred	550.00		
		749.20	
Balance unexpended		$50.80	

For Compensation of School Committee of 1867.

School Committee		$925.00	
Secretary		200.00	
			$1,125.00
Appropriation	$1,125.00		
Amount of Expenses	1,125.00		

For Care and Repairs of School-Houses.

Rent of halls for school-rooms		$890.38	
School furniture and repairs		1,001.66	
Fuel		4,381.68	
Care of houses, fires, etc., etc.		4,114.64	
Repairs and materials		7,428.14	
Books and stationery		2,047.21	
Printing and advertising		529.04	
Collecting statistics		6.00	
Water-rates and gas		329.98	
Truckage		12.65	
Ringing bell		7.50	
			$20,748.88
Appropriation	$20,000.00		
Additional Appropriation	1,000.00		
		$21,000.00	
Amount of Expenses		20,748.88	
Balance unexpended		$251.12	

For New School-Houses.

House on Winsor street		$12,000.00
House on Putnam street		7,000.00
Amount carried forward		$19,000.00

Amount brought forward .	$19,000.00	
House on Reed street	5,200.00	
Architect	300.00	
Copying specifications	5.00	
Advertising	7.75	
		$24,512.75

Appropriation . .	$30,000.00
Amount of Expenses	24,512.75
Balance unexpended	$5,487.25

For Almshouse and Stone Ledge.

Warden, salary	$1,025.00
Matron, salary	75.00
Physician, salary	112.50
Chaplain, salary	84.25
Clerk of Overseers, salary	225.00
Overseer of Sewing-room, salary . .	163.00
Illness of Warden, and funeral expenses .	893.50
Commission on sale of produce . .	30.00
Supplies for the house	6,722.17
Dry goods, clothing, etc.	1,160.52
Sundry laborers	7,336.74
Fuel	504.39
Supplies to poor out of the house . .	3,136.50
Medical attendance out of the house .	157.89
Support of boys and girls in State Institutions	1,245.37
Support of patients in State Institutions .	891.84
Support of paupers out of the City .	544.58
Removing paupers	135.00
Travelling expenses	37.90
Repairs on house	850.83
Repairs and iron work	1,030.78
Bell	42.80
Furniture	568.31
Canceling stamp	12.00
Wagon	100.00
Amount carried forward . .	$27,085.87

Amount brought forward		$27,085.87
Cows		145.00
Grain, meal, hay, and straw		1,612.53
Tools, hardware, etc.		917.71
Lumber		566.00
Veterinary services		25.00
Newspapers, stamps, and postage		26.62
Printing and advertising		70.00
Powder and fuse		354.00
Cast-steel		36.66
Funeral expenses		368.50
Truckage		3.00
		$31,210.89
Appropriation	$24,000.00	
Additional Appropriation	7,500.00	
	$31,500.00	
Amount of Expenses	31,210.89	
Balance unexpended	$289.11	

For Police and Watch.

Chief of Police, salary	$1,425.00
Services of regular and special police	33,090.00
Conveyance of prisoners	846.81
Supplies for prisoners and lodgers	48.20
Gas	175.14
Fuel	291.89
Furniture	84.08
Hardware, oil, etc.	52.22
Water-rates	37.00
Repairs	90.48
Uniform and badges	170.00
Funeral expenses	26.50
Medical attendance at stations	17.00
Care of Police Court-room	124.43
Horse-hire	8.00
Posting bills, etc.	10.63
Post-office box	1.00
Burying nuisances	9.25
	$36,507.63

Appropriation . .	$35,000.00	
Additional Appropriation	1,600.00	
		$36,600.00
Amount of Expenses . . .		36,507.63
Balance unexpended . . .		$92.37

For Fire Department.

Chief Engineer, salary	$500.00
Assistant Engineers, salaries . . .	531.66
Clerk of Engineers, salary . . .	21.89
Services of members	14,202.07
Fines of members	177.00
Furniture	96.30
Grain, meal, hay, and straw . . .	1,566.32
Horse-hire	387.00
Harnesses and repairs	77.66
Repairs and materials	2,999.81
Use of water for hydrants . . .	4,590.00
Water-rates	89.17
Extinguishers	109.00
Gas	287.70
Fuel	448.27
Appropriation for Company No. 5 . .	300.00
Appropriation for Company No. 7 . .	264.00
Refreshments to out-of-town companies .	30.00
Labor on hydrants and reservoirs . .	75.00
Police services	20.00
Caps and badges	17.80
Hardware, oil, etc.	194.28
Horse-shoeing and iron work . .	176.52
Veterinary services	52.00
Rent of stable	55.00
Flag-staff and flag	69.50
Travelling expenses	16.80
Truckage	30.60
Ringing bells	55.50
Post-office box	2.00
Bed-clothes and washing . . .	181.90
	$27,624.75

Appropriation . .	$28,000.00
Amount of Expenses .	27,624.75
Balance unexpended	$375.25

For Streets and Paving.

Amount paid for labor . . .	$19,062.51	
Labor and materials for paving . .	6,736.25	
Gravel, stone, brick, and carting . .	7,605.46	
Lumber	154.28	
Surveys and plans	168.20	
Horses	525.00	
Boarding horse	73.22	
Horse-shoeing and iron work . .	1,624.73	
Grain, meal, hay, and straw . . .	3,052.92	
Carts	200.00	
Harnesses and repairs	156.25	
Repairs	89.22	
Street signs	25.00	
Sundry expenses at stable	97.21	
Shovels, hardware, etc.	314.48	
Rent of land for storage of stone and gravel	45.00	
Veterinary services	58.45	
		$39,988.18

Appropriation . .	$40,000.00
Amount of Expenses .	39,988.18
Balance unexpended	$11.82

For Reservoirs and Drains.

Amount paid for labor . . .	$5,888.37	
Bricks, stone, and drain-pipe . . .	4,221.63	
Lumber, cement, and lime . . .	368.61	
Pumps, reservoir covers, and gates . .	197.72	
Tools, nails, castings, etc. . . .	96.56	
Rubber coat and boots	18.00	
Truckage	2.75	
		$10,793.64

Appropriation . .	$12,000.00
Amount of Expenses .	10,793.64
Balance unexpended	$1,206.36

For Care and Repairs of Bridges.

Rebuilding draw on River street . .	$891.41	
Care of draws	1,979.43	
Repairs	2,343.83	
Paving, edge-stone, and gravel . .	775.48	
Lumber	1,813.37	
Hardware, salt, oil, etc. . . .	161.50	
Gratuity	150.00	
Water-rates	11.00	
Truckage	24.75	
		$8,150.77
Appropriation . .	$15,000.00	
Amount of Expenses .	8,150.77	
Balance unexpended	$6,849.23	

For Lighting Streets.

Superintendent of Lamps, salary . .	$200.00	
Gas for street-lamps	6,908.75	
Fluid, naphtha, matches, etc. . . .	457.15	
Care of lamps and lighting . . .	2,810.62	
Lamp-posts and fitting	499.06	
Lanterns and repairs	730.12	
		$11,605.70
Appropriation	$14,000.00	
Amount of Expenses .	$11,605.70	
Transferred . . .	600,00	
	12,205.70	
Balance unexpended . .	$1,794.30	

For Watering Streets.

Paid for watering	$3,500.00
Appropriation . .	$3,500.00
Amount of Expenses .	3,500.00

For Salaries of City Officers.

Mayor	$1,500.00	
Treasurer and Collector	2,250.00	
City Clerk	2,000.00	
Auditor of Accounts	500.00	
Clerk of Common Council	150.00	
Messenger	900.00	
Board of Assessors	3,000.00	
Superintendent of Streets and Drains	1,425.00	
		$11,725.00
Appropriation	$13,000.00	
Amount of Expenses $11,725.00		
Transferred 1,000.00		
	12,725.00	
Balance unexpended	$275.00	

For Burial-Grounds.

Superintendent's salary	$900.00	
Sundry workmen	5,396.58	
Expense of building lodge	5,100.00	
Use of horse	249.96	
Trees and sods	122.25	
Cement, drain-pipe, tools, etc.	89.82	
Repairs of tools	27.50	
Surveys and plans	196.00	
Post-office box and stamps	12.00	
Printing, stationery, etc.	28.87	
		$12,122.98

OLD GROUNDS.

Improving ground, Ward I. $631.74		
Care of ground, Ward I. 12.00		
	$643.74	
Care of ground, Ward II.	12.50	
		656.24
		$12,779.22

Appropriation . .	$12,000.00		
Additional Appropriation	800.00		
		$12,800.00	
Amount of Expenses . . .		12,779.22	
Balance unexpended . . .		$20.78	

For Interest and Bank Discounts.

Cambridge City Bonds . . .		$49,814.00	
Cambridge City Bonds (gold) . .		7,500.00	
Lowell Institution for Savings . .		2,330.00	
Trustees of Sanders Temperance Fund .		600.00	
Trustees of Dowse Institute . . .		600.00	
Trustees of Daniel White Charity . .		300.00	
Premium for gold		2,775.00	
Sundry banks, etc., on temporary loans .		11,041.78	
			$74,960.78
Appropriation . .	$73,000.00		
Additional Appropriation	2,000.00		
		$75,000.00	
Amount of Expenses . . .		74,960.78	
Balance unexpended . . .		$39.22	

For Dana Library.

Librarian, salary	$250.00.	
Assistant Librarian, salary	32.00	
Rent of room	375.00	
Care of room	125.00	
Books and stationery	373.90	
Binding books	19.40	
Book-case	89.20	
Insurance	20.00	
Gas and water-rates	50.04	
Fuel	10.72	
Incidental expenses	12.50	
		$1,357.76

Appropriation . .	$1,000.00	
Additional Appropriation	357.76	
		$1,357.76
Amount of Expenses . . .		1,357.76

For Volunteers and their Families.

Amount paid to soldiers' families . . .		$19,000.00
Appropriation	$20,000.00	
Amount of Expenses . . .	19,000.00	
Balance unexpended . .	$1,000.00	

For Telegraphic Fire Alarm.

Appropriation . .	$15,000.00
Transferred . .	15,000.00

For Care and Repairs of Water Works.

Superintendent, salary . . .	$1,500.00
Water Registrar	1,200.00
Clerk of Water Board	150.00
Engineer	1,366.69
Foreman	366.68
Sundry workmen	4,261.56
Repairs and iron work	450.52
Castings, pipe, and boiler . . .	95.23
Valves, pump, cement, and packing . .	169.54
Assistance in office	715.00
Printing and advertising	113.00
Travelling expenses, etc. . . .	17.33
Horse	175.00
Board of horses and shoeing . . .	548.01
Horse-hire	196.00
Wagon, sleigh, and robe . . .	169.00
Storing and repairing wagon . . .	22.01
Freight and truckage	1,033.20
Fuel and wharfage	2,838.22
Tools, cotton waste, oil, etc. . . .	235.37
Amount carried forward .	$15,622.36

Amount brought forward	$15,622,36	
Office and shop rent	600.00	
Damages	70.00	
Water-rates refunded	164.85	
Cash paid for sundries	51.64	
		$16,508.85
Appropriation	$18,000.00	
Amount of Expenses	16,508.85	
Balance unexpended	$1,491.15	

For Supply Account of Water Works.

Sundry workmen	$5,370.60	
Supplies	7,619.24	
Repairs, tools, etc.	438.07	
Hydrants and truckage	34.00	
		$13,461.91
Appropriation	$10,000.00	
Additional Appropriations	3,500.00	
	$13,500.00	
Amount of Expenses	13,461.91	
Balance unexpended	$38.09	

For Extension of Water Works.

Foreman	$733.35
Sundry workmen	39,090.79
Pipes, freight, and wharfage	34,157.27
Water-gates	4,493.25
Pumping engines	19,000.00
Stationary engine	275.00
Meters	1,225.00
Steam gauge, cocks, etc.	502.50
Wall at reservoir	13,821.64
Stone, gravel, clay, and paving	15,741.78
Cement, lime, and sand	5,159.15
Lumber and carpenters' work	7,816.37
Amount carried forward	$142,016.10

Amount brought forward		$142,016.10
Brick and masons' work		4,673.50
Iron work and castings		4,904.58
Lead		2,430.08
Drain-pipe, tools, etc.		1,107.50
Packing		293.39
Conductors and roofing		1,005.88
Fuel		64.44
Surveys and plans		138.00
Boarding horses and horse-hire		147.00
Travelling expenses		100.00
Truckage		3,615.91
		$160,496.38
Appropriation	$148,109.20	
Additional Appropriation	13,000.00	
	$161,109.20	
Amount of Expenses	160,496.38	
Balance unexpended	$612.82	

For Sinking Fund of Water Works.

Amount paid to Trustees of Fund		$836.16
Appropriation	$10,000.00	
Amount of Expenses	$836.16	
Transferred	9,163.84	
	10,000.00	

For Incidental Expenses.

Legal services and expenses	$78.05
Extra allowance to Superintendent of Streets	75.00
Extra allowance to Messenger	75.00
Assistant Assessors, services	1,064.00
Abstract of records for Assessors	150.00
Insurance of public buildings	1,206.72
Somerville tax-bill	528.96
Belmont tax-bill	115.14
Surveys and plans	110.00
Amount carried forward	$3,402.87

Amount brought forward	$3,402.87
City Engineer, services	1,859.17
Assistant Engineer, services	1,260.00
Expenses of Engineer's Office	140.48
Recording births, deaths, and marriages	499.55
Reporting deaths	24.70
Assessing drain taxes	15.41
Allowance for counterfeit money	29.00
Treasurer, for clerical assistance	285.00
City Clerk, for clerical assistance	1,000.00
Books and stationery	750.94
Revenue stamps and postage	359.16
Newspapers	48.72
Canceling-stamps	38.00
Printing and advertising	2,009.61
Page of Common Council	50.00
Railway tickets	372.00
Rent of armory	100.00
Flags and repairs	110.28
Lowering and raising flags and topmasts	35.05
Fences and labor in public squares	367.25
Rent of land for watering-tank	25.00
Rent of land for pound	20.00
Furniture for City Hall	286.90
Fuel	183.15
Gas	517.86
Ice	21.00
Water-rates	18.00
Water-rates for fire hydrants	1,202.50
Repairs	1,934.61
Repairs at City Hall	670.14
Expenses, floral celebration	420.50
Expenses, reception of Chinese Embassy	3,625.89
Supper for City Government	286.50
Support of girls at Industrial School	148.92
Co. C, Fifth Regiment, services at musters, etc.	855.50
Amount carried forward	$22,973.66

Amount brought forward		$22,793.66
Land		10,690.95
Commission on sales of land		53.02
Land damages		5,296.60
Paid harbor police		21.00
Building bathing-places		235.07
Completing sidewalks		2,855.37
Music for High-school exhibition		50.00
Trees and setting		525.50
Medical attendance		79.00
Care and repairs of clocks		175.25
Cleaning at City Hall, brooms, mats, etc.		452.74
Rent and care of ward-rooms		60.50
Refreshments for ward-officers		35.00
Milk Inspector, salary		125.00
Measures and sealing		71.14
Bell-ringing		244.50
Horse-hire		20.00
Truckage		45.51
		$44,009.81
Appropriation	$30,000.00	
Additional Appropriation	14,139.90	
		$44,139.90
Amount of Expenses		44,009.81
Balance unexpended		$130.09

FOR RESERVED FUND.

Appropriation	$20,000.00
Transferred	19,200.00
Balance unexpended	$800.00

RECAPITULATION OF EXPENDITURES FOR THE FINANCIAL YEAR ENDING NOVEMBER 30, 1868.

	Original Appropriations.	Added subsequently.	Subtracted subsequently.	Appropriations as altered.	Amount of Expenditures.	Balances unexpended.
Instruction in Public Schools	$84,000.00	$1,550 00	–	$85,550.00	$84,464.97	$1,085.03
Scientific Department of High School	200.00	66.18	–	266.18	266.18	–
Text-Books for High School	100.00	–	–	100.00	96.00	4.00
Evening Schools for Adults	1,000.00	–	–	1,000.00	–	1,000.00
Hopkins Fund	800.00	–	$550.00	250.00	199.20	50.80
Compensation of School Committee of 1867	1,125.00	–	–	1,125.00	1,125.00	–
Care and Repairs of School-houses	20,000 00	1,000.00	–	21,000.00	20,748.88	251.12
New School-houses	30,000.00	–	–	30,000.00	24,512.75	5,487.25
Almshouse and Stone Ledge	24,000.00	7,500.00	–	31,500.00	31,210.89	289.11
Police and Watch	35,000.00	1,600.00	–	36,600.00	36,507.63	92.37
Fire Department	28,000.00	–	–	28,000.00	27,624.75	375.25
Streets and Paving	40,000.00	–	–	40,000.00	39,988.18	11.82
Reservoirs and Drains	12,000.00	–	–	12,000.00	10,793.64	1,206.36
Care and Repairs of Bridges	15,000.00	–	–	15,000.00	8,150.77	6,849.23
Lighting Streets	14,000.00	–	600.00	13,400.00	11,605.70	1,794.30
Watering Streets	3,500.00	–	–	3,500.00	3,500.00	–
Salaries of City Officers	13,000.00	–	1,000.00	12,000.00	11,725.00	275.00
Burial Grounds	12,000.00	800.00	–	12,800.00	12,779.22	20.78
Interest and Bank Discounts	73,000.00	2,000.00	–	75,000.00	74,960.78	39.22
Dana Library	1,000.00	357.76	–	1,357.76	1,357 76	–
Volunteers and their Families	20,000.00	–	–	20,000.00	19,000.00	1,000.00
Telegraphic Fire Alarm	15,000.00	–	15,000.00	–	–	–
Care and Repairs of Water Works	18,000.00	–	–	18,000.00	16,508.85	1,491.15
Supply Account of Water Works	10,000.00	3,500.00	–	13,500.00	13,461.91	38.09
Extension of Water Works	148,109.20	13,000.00	–	161,109.20	160,496.38	612.82
Sinking Fund of Water Works	10,000.00	–	9,163.84	836.16	836.16	–
Incidental Expenses	30,000.00	14,139.90	–	44,139.90	44,009.81	130.09
Reserved Fund	20,000.00	–	19,200.00	800.00	–	800.00
Amount of Appropriations	$678,834.20	–	–	$678,834.20	$655,930.41	$22,903.79
Amount of Expenditures	–	–	–	655,930.41	–	–
Balances unexpended	–	–	–	$22,903.79	–	–

DR. JOS. WHITNEY, TREASURER,

1867.		
	Balance	$78,581.73
Dec. 1.	State of Massachusetts, State Aid	26.000.00
	State of Massachusetts, Corporation Tax	28,261.12
	State of Massachusetts, Militia Bounty	108.20
	State of Massachusetts, Armory Rent	100.00
	J. K. Farwell, Superintendent, account Cambridge Cemetery	8,201.00
	Sundry Weighers, Weighing Fees	653.74
	Sundry persons, for paving	556.58
	A. F. Fifield, Registrar, account Cambridge Water Works	79,434.56
	Sundry persons, Drain Assessments	2,982.93
	Geo. L. Cade, Superintendent	1,392.09
	Geo. L. Cade, Superintendent, horse sold	100.00
	Thos. McIntire, Jr., Clerk, on account Police Court	2,861.71
	Sundry Persons and Institutions, Temporary Loan	231,120.35
	C. F. Orne, Librarian, account Dana Library	289.20
	City Bonds sold	175,124.10
	Accrued Interest on Bonds sold	2,051.33
	R. Litchfield, Jr., Messenger, Rent of City Hall	403.50
	J. Hanscom, and J. W. Averill, Wardens, account Almshouse	15,969.60
	Old Iron sold	36.00
	Rent of No. 6 Engine House	54.99
	Pasturing Sheep	41.00
	Rent of Hospital Building	44.17
	Cambridge Water Works, Rent of Office and Shop	600.00
	Sundry Insurance Companies, for Loss on Gannett School-house	1,188.00
	Old Hearse sold	30.00
	Damage to furniture at Police Station	6.00
	Damage to Lamp Post	20.00
	Arthur Merrill, State Aid refunded	65.00
	State of Massachusetts, School Fund	2,050.60
	Trustees of Hopkins Charity	874.19
	Circus and Auctioneers' Licenses	38.00
	Land on Sidney Street sold	1,490.95
	Hospital Building sold	525.00
	Sundry persons, tax on Bank Shares	580.34
	Sundry persons, percentage on Liquor Sales	410.44
	Taxes of 1865	20.00
	Taxes of 1866	1,878.11
	Taxes of 1867	34,877.10
	Taxes of 1868	430,282.07
	Interest on taxes	927.61
		$1,130,231.31

CAMBRIDGE, *December* 1, 1868.

IN ACCOUNT WITH THE CITY OF CAMBRIDGE. Cr.

1867. Dec. 1.	State Tax	$126,050 00
	County Tax	22,450.22
	Sundry persons, per Mayor's Drafts and Order	580,837.17
	Sundry persons, Temporary Loan	230,656.97
	Interest on Temporary Loan	11,041.78
	Interest on Permanent Loan	64,481.50
	Balance on hand	94,713.67
		$1,130,231.31

JOS. WHITNEY, *Treasurer.*

ACCOUNT OF CITY DEBT, DECEMBER 1, 1868.

Date.	Rate.	To whom payable.	Amount.	Total.	When payable.	Interest paid to.
Nov. 6, 1850.	5½	Lowell Institution for Savings	$3,000.00		Nov. 6, 1870.	Nov. 6, 1868.
Jan. 23, 1851.	5½	Lowell Institution for Savings	8,000.00		Jan. 23, 1871.	July 23, 1868.
April 6, 1857.	5¾	Lowell Institution for Savings	30,000.00		April 6, 1871.	Oct. 6, 1868.
July 1, 1858.	5	Cambridge City Bonds	7,000.00		July 1, 1878.	July 1, 1868.
July 1, 1859.	5	Cambridge City Bonds	15,000.00		July 1, 1879.	July 1, 1868.
July 1, 1862.	5	Cambridge City Bonds	20,000.00		July 1, 1882.	July 1, 1868.
Aug. 1, 1862.	5	Cambridge City Bonds	30,000.00		Aug. 1, 1882.	Aug. 1, 1868.
Sept. 10, 1862.	5	Cambridge City Bonds	40,000.00		Sept. 10, 1882.	Sept. 10, 1868.
Sept. 10, 1862.	5	Cambridge City Bonds	30,000.00		Sept. 10, 1877.	Sept. 10, 1868.
Nov. 20, 1862.	5	Cambridge City Bonds	14,000.00		Nov. 20, 1882.	Nov. 20, 1868.
Mar. 5, 1863.	5	Cambridge City Bonds (gold)	150,000.00		Jan. 1, 1893.	July 1, 1868.
April 1, 1864.	5	Cambridge City Bonds	100,000.00		April 1, 1889.	Oct. 1, 1868.
				$447,000.00		
July 1, 1856.	6	Cambridge Water Loan	50,000.00		July 1, 1881.	July 1, 1868.
May 1, 1865.	6	Cambridge Water Loan	186,400.00		May 1, 1875.	Nov. 1, 1868.
Aug. 1, 1865.	6	Cambridge Water Loan	55,000.00		Aug. 1, 1883.	Aug. 1, 1868.
July 2, 1866.	6	Cambridge Water Loan	100,000.00		July 2, 1886.	July 2, 1868.
April 1, 1867.	6	Cambridge Water Loan	150,000.00		April 1, 1888.	Oct. 1, 1868.
April 1, 1868.	6	Cambridge Water Loan	175,000.00			Oct. 1, 1868.
				716,400.00		
Oct. 1, 1863.	6	Trustees of Daniel White Charity	5,000.00		On demand.	Oct. 1, 1868.
June 1, 1858.	6	Trustees of Dowse Institute Fund	10,000.00			June 1, 1868.
Oct. 8, 1864.	6	Trustees of Sanders' Temperance Fund	10,000.00			Oct. 8, 1868.
				25,000.00		
		State Tax	50,420.00		Dec. 1, 1867.	
		County Tax	23,252.01	73,672.01	Dec. 31, 1867.	
				$1,262,072.01		

REPORT

OF THE

COMMITTEE ON SOLDIERS AND THEIR FAMILIES.

The Joint Committee on Soldiers and their Families submits to the City Council its report for the year ending November 30, 1868.

The payments of State Aid as returned to the Auditor of the Commonwealth, are for the year ending December 31, 1868.

By Chapter 107, of the Acts of 1868, the payment of State Aid to those who were dependent upon dead or disabled soldiers or sailors, is extended to the first day of January, 1871, so that, unless some change shall be made in the law, the drafts upon the treasury of the city for aid will be about the same for the next two years, as for the year just ended.

The whole number of cases in which aid has been granted during the year has been 261. Of these, 4 were under the old law. The number now on the list is 236, of which one is under the old law.

The appropriation for Volunteers and their Families was	$20,000.00
The amount paid to Soldiers and their Families .	19,000.00

The monthly payments now amount to about $1,500, and an appropriation of $20,000 will be sufficient for the ensuing year.

In pursuance of an order of the City Council, passed in June last, headstones have been placed on the graves in the Soldiers' Burial Lot, at the Cambridge Cemetery. Twenty marble slabs were placed in said lot, nineteen of which bear the names and the designation of the company and regiment of the deceased. The twentieth is as yet unmarked, there being no record to determine the name of the soldier buried there. It is hoped that informa-

tion will be obtained to enable the committee to have this stone suitably inscribed.

All which is respectfully submitted.

S. F. WOODBRIDGE,
J. S. MARCH,
CHARLES F. WALCOTT,
ELIJAH H. LUKE,
JAMES H. SPARROW,
J. W. COVENEY.

Committee on Soldiers and their Families.

CAMBRIDGE, *December* 30, 1868.

REPORT

OF THE

COMMISSIONERS OF THE CAMBRIDGE CEMETERY.

Agreeably to the Statutes of the Commonwealth, the Commissioners of the Cambridge Cemetery herewith respectfully submit to the City Council their Fourteenth Annual Report, for the financial year ending November 30, 1868.

During the past year the Commissioners have spared no pains in making such improvements as seemed most desirable, to develop and beautify the grounds of the Cemetery.

About one hundred and fifty forest trees have been set out upon prominent walks, while avenues have been improved by grading, new lots laid out, and others brought up to a condition for sale by grading, sodding, etc. The great want for the past two years has been a suitable office for the Superintendent, and a public room or persons visiting the Cemetery, to replace the one burned in 1866. Early in the year this subject was duly considered by the Commissioners, who decided to ask for an appropriation of five thousand dollars, for the immediate erection of a building for this purpose. The appropriation was made, and a neat stone lodge has been erected, containing a public room, superintendent's office, and other conveniences, at a cost of about fifty-one hundred dollars. The building is of dark blue stone, with light Concord granite trimmings, having a vestibule, and steps of the same material, being not only a durable structure, but nearly fire-proof. The inside is neatly finished with chestnut, and the rooms heated by a furnace. This building will be found to be indispensable, and in addition to its public convenience, will be a great ornament to the Cemetery. The work on Island Pond has been continued. Walks have been constructed on the outer edge of the island, and a car-

riage-way built through the centre, to be connected by a bridge with the southerly bank. This pond covers a large area, and when completed, with the banks neatly sodded, and the grove already upon the island, will become the most attractive spot within the Cemetery. It is now but fourteen years since these grounds were dedicated to this use. During this period, five thousand eight hundred interments have been made (including the removals from the Second Ward). The number of interments made during the past year was three hundred and twenty-one, and with the prospective increase, our present territory will, at no very distant period, be again too circumscribed.

The expenditures for the year ending November 30, 1868, have been as follows: —

Superintendent's salary	$900.00
Sundry workmen	6,582.43
Use of horse	249.96
Sundry other expenses	476.44
Total,	$8,208.83

The receipts have been as follows: —

For burial lots	$6,284.00
For burial fees	782.00
For care of lots	908.50
For grave markers	26.00
For hay	90.00
For wood	91.50
For sedge grass	12.00
For cedar posts	7.00
Making a total of	$8,201.00
The total appropriation for burial grounds, including amount for building new lodge, was	$12,800.00
Total expenditure, including new lodge, and expense of repairs in old burial ground,	12,779.22
Balance unexpended,	$20.78
Number of lots now prepared and ready for sale	78
Number of lots sold during the year	89

The value of lots now ready for sale is about $13,000.00. Increase of receipts over previous year, $2,979.85. The receipts from the sale of lots for the future will probably be sufficient nearly to defray all the yearly current expenditures. The new portion will be developed from time to time, as may be required, without a great outlay for any single year. The amount required for the coming year will not probably exceed seven thousand dollars. An arrangement has been made, whereby for a small annual charge to the proprietors, the superintendent assumes the care of the lots for the season, thus adding much to the attractiveness of the grounds, by keeping them in perfect order. This arrangement has been generally complied with, and the improvement has been an observable feature in the Cemetery the past year. The Soldiers' Lot contains the remains of twenty of our brave volunteers, and neat marble tablets have been placed over each grave during the year (with one exception not yet completed), with the names, dates, etc., and this lot now presents a fine appearance.

With the large number of lots now on hand, and the present good condition of the grounds, a smaller outlay than usual will continue the improvements already commenced, and provide for the demands of the future. Our Cemetery is fast becoming one of the most attractive in our vicinity, and with the proper grading of the avenue from Mt. Auburn Street to the gateway completed, will continue to improve, and year by year we trust be more fully appreciated by our citizens.

CHARLES H. SAUNDERS,
Z. L. RAYMOND,
JOHN C. FARNHAM,
C. M. HOVEY,
J. H. TYLER,
GEORGE S. SAUNDERS,
DANIEL U. CHAMBERLIN.

Commissioners of Cambridge Cemetery.

CAMBRIDGE, *December* 18, 1868.

REPORT

OF THE

BOARD OF OVERSEERS OF THE POOR.

The Overseers of the Poor herewith respectfully submit to the City Council their Annual Report for the financial year ending November 30, 1868.

The amount of appropriation made by the City Council at the beginning of the year for the Almshouse and Stone Ledge, was . . .		$24,000.00
Additional appropriation		7,500.00
Total amount		$31,500.00
Whole amount expended for the year .		31,210.89
Balance unexpended		$289.11

The receipts have been as follows, namely: —

From products of the farm . .	$4,289.41	
From piggery, for sale of hogs and pigs	3,835.98	
From ledge, for stone . . .	7,365.79	
From the State, and cities and towns	1,455.43	
		$16,946.61
Amount now due from other cities and towns, for the support of paupers .	$414.17	
From the State	688.64	
For stone delivered sundry persons .	1,954.95	
For bills paid, not yet received from the city	977.01	
		4,034.77
Making a total of		$20,981.38

RECAPITULATION.

Total appropriation for the year . .		$31,500.00
Balance unexpended . .	$289.11	
Amount of receipts from all sources	16,946.61	
Amount now due as above .	4,034.77	
		$21,270.49
Actual expense of Almshouse over income, for the year		$10,229.51
Expense of establishment over income, 1867 . .		$11,147.11
Expense of establishment over income, 1868 .		10,229.51
Being a reduction from the previous year of .		$917.60
Value of personal property, as appraised 1868 .		$19,066.90
Value of personal property, as appraised 1867 .		17,507.21
Increased appraised value of personal property over 1867		$1,559.69

The whole number of persons relieved or supported at the Almshouse during the past year has been one hundred and fifty-one. This number, of course, does not include any supported at the State Lunatic Hospitals, or at the several Reform establishments of the State, nor those who have been relieved out of the house. The average number of inmates supported at the Almshouse during the year was seventy-six, being twelve less than the previous year.

The year commenced prosperously with the Warden and Matron, who had so long and faithfully held these positions. On the 4th day of April, the Warden (Mr. Hanscom), while directing the work at the Ledge, was suddenly, and without warning, struck down by one of the workmen. The blow fractured the skull, rendering him senseless. Every possible attention was bestowed by the Board of Overseers and friends. After acute suffering for nearly three weeks (except when under the effect of opiates), he died April 25. The Overseers deemed it highly fitting and proper that all the expenses of his sickness and funeral should be assumed by the City. This sad event cast a gloom over

the entire establishment and the community. All felt that a long-tried and efficient public officer (who had the fullest confidence of those under his charge) had been removed, and that his place could not easily be filled. In June last, the present Warden and Matron (Mr. and Mrs. Averill) were chosen by the Overseers, and entered upon their duties July 1. Good order and discipline have been observed, and the establishment has been well conducted under their supervision.

The system of management remains the same as heretofore. The school is still taught by Mrs. Rand, under whose faithful training it continues to be a credit to our city, and will compare favorably with any similar school outside of the house. Good deportment prevails, and the singing is well performed by the scholars. Religious services are held, and Sabbath-school instruction given every Sabbath.

Owing to the change made, it was found that extensive repairs upon the building were much needed, and that a portion of the same would need to be refurnished. The house has been painted throughout, and put in complete order (no repairs of consequence having been made since its erection in 1852), and refurnished where necessary. The earnings for the year have largely increased in all of the departments. The gain over the previous year being $6,021.15. The increase of expenses has been $5,392.66, but this amount includes over $2,300 expended in the repairs, and extra expenses of the year. New rules have been adopted for the Warden, and a system commenced for keeping the accounts separately, and in the future each department will show the result of the year, whether of profit or loss. The result for the past year has been a favorable one for the establishment, although a smaller house would better subserve the comfort and convenience of the inmates, at a much reduced cost, and a sale of the present building is advisable.

All of which is respectfully submitted.

CHARLES H. SAUNDERS,
M. L. SMITH,
J. L. BAILEY,
J. WATSON HARRIS,
L. B. GUYER,
WILLIAM CALDWELL,
JOSEPH H. RICE.

Overseers of the Poor of Cambridge.

CAMBRIDGE, *December* 18, 1868.

REPORT

OF

JAMES R. MORSE, M. D.,

VISITING PHYSICIAN.

To the Overseers of the Poor of the City of Cambridge: —

GENTLEMEN, — In accordance with the regulations of your Board, I herewith submit my report of services rendered during the past year as Physician at the Almshouse.

I have made regular daily visits to thirty-five persons, besides giving medical advice to, and prescribing for a large number of persons who were suffering from disease and debility.

Of those who have been under my care, four have died, as follows: two from old age, one from apoplexy, and one from marasmus.

Among the whole number of persons who have suffered from disease, twelve cases of lung fever, ten of measles, three of fracture, one of fistula, one of spinal disease, and a large number of indolent ulcers have received medical assistance.

A large number of persons have been received into the house, who had become very much debilitated, by long continued disease, exposure, and insufficient or unwholesome food, nearly all of whom have returned to their homes and friends, healthy, or much improved.

Two cases of confinement have occurred in the house, and two foundlings have been received, and kindly cared for by the Warden and Matron, until by direction of the Overseers they were removed.

When requested by any member of your Board, I have visited (at their homes) all persons who have sought aid from the city, to ascertain their condition, and to see in what manner they could be most effectually relieved from want and suffering.

The large number of chronic cases which have received medical care the past year, has rendered it necessary to make frequent visits to the house, with the hope of thereby contributing to the health and comfort of the feeble and unfortunate.

In closing this brief report I cannot refrain from referring to the sad event, which has called from his earthly labors and his earthly home, our former much-loved Warden. I feel conscious, that not only in sympathy with his wife and family, but with the feeling also of a great personal loss, are you called to participate in the deep affliction which has come upon us all. It has, however, seemed fortunate, that in the great trial hour of this institution, you have been so wisely directed in the selection of a Warden and Matron, who possess warm and sympathizing hearts, anxious to do all that can be done for the comfort and health of the unfortunate and suffering inmates. For your personal kindness and friendship to me, gentlemen, accept my warmest thanks.

Respectfully yours,

J. R. MORSE.

CAMBRIDGE, *December* 31, 1868.

REPORT

OF THE

CHIEF ENGINEER OF THE FIRE DEPARTMENT.

ENGINEER'S OFFICE, FIRE DEPARTMENT,
CAMBRIDGE, *December* 18, 1868.

To the Honorable Mayor and City Council: —

GENTLEMEN, — The following report upon the condition of the Fire Department is herewith presented, containing rolls of the several companies, with a schedule of the apparatus in their charge, a list of the location of reservoirs and hydrants, together with a tabular statement relative to fires and alarms during the year.

The houses of the Department are in good condition, and with the exception of that occupied by Steamer No. Three, are convenient. I refer to the limited space in the engine-room, which will not admit of harnessing the horse to the hose carriage, until the steamer has left the house.

The engine rooms of the steamer houses have been sheathed, painted, and otherwise improved, presenting a more cheerful and homelike appearance, much to the gratification of the permanently employed men.

The engines are in good condition, Steamer No. Two having been thoroughly repaired, painted, and furnished with new wheels and copper flues. Engine No. One has also been repaired, painted, and furnished with brass flues. This engine has been employed for the last four days in removing the water from Central Pond, at the Cemetery, working through six hundred and fifty feet of hose, with perfect success.

No. Three Horse Hose Carriage has been recently painted, and supplied with new wheels of the New Haven pattern.

The wheels of our engines and carriages, owing to the warm

temperature of the houses to which they are subjected, fail sooner than other parts, and those of Carriages No. One and Two will soon undergo repairs, or have to be replaced by new ones.

Thirty-five alarms have occurred during the year, twenty-nine of which were for fires in the City, three from out of the City, and three from other causes. Seven alarms originated in East Cambridge, fourteen in the 'Port, eight in Old Cambridge, and three in North Cambridge. Engines have been used at seventeen fires, and on one occasion only have they all been together during the year. Assistance has been received from out of the City three times; assistance rendered, once.

The loss by fire is $29,540. Insurance on losses, $13,390. Notwithstanding the constantly increasing liability to fire by the rapid accumulation of buildings, both dwellings and manufactories, we have had comparatively few, and when I consider how inadequate is our present force to cope with fires of more than ordinary magnitude successfully, and the delay we experience, and inconvenience we encounter in having the alarms communicated from one section to another, I think we have reason to congratulate ourselves that our fires have been so few, and our losses so small, as to compare favorably with those of the smaller cities, and even towns of New England. This must not be considered a criterion for the future of our city, containing, as it does, so large a percentage of wooden buildings.

There is an absolute necessity for the location of a steamer in the vicinity of Atwood's Corner, to meet the present requirements in the 'Port and East Cambridge.

The new steamer to be located in the house at North Cambridge, now in process of construction, will be of no general benefit, until we have a better method of communicating alarms.

There is but one steamer and a hand engine in the 'Port, and I doubt whether there is so large a portion of populated territory in any city so poorly protected. I earnestly recommend that a steamer be located in the place referred to the coming season. When this is done, the Hand Engine Company, No. Four, should be displaced by a hose company, which can be run at less expense, and be of more general benefit to the City. I trust that these changes will soon be made, and that a telegraphic fire alarm will be adopted the coming year, to connect with the several engine

houses, if nothing more. No city which can afford to have a Steam Fire Department, can afford to be without a telegraph, particularly where the engines are one and a quarter miles apart.

The roll of the Department numbers one hundred and thirty-five men, leaving fourteen vacancies. Thirty-one persons have been admitted, and thirty-five discharged, thus showing a fair average membership during the year. The Department has been prompt and efficient, generally observing a strict regard for the discipline which is so essential to insure a faithful performance of their arduous, and oftentimes dangerous duties. That their services are duly appreciated, we have frequent assurance, and I trust that the general deportment of the Department will be such on all occasions as to merit the approbation of your Honorable Body.

Respectfully submitted,

GEO. B. EATON,

Chief Engineer.

BOARD OF ENGINEERS.

Chief Engineer.

George B. Eaton,	Columbia, cor. Washington Street.

Assistant Engineers.

Thomas J. Casey,	Cambridge, near Sixth Street.
Jacob A. Holt,	Appian Way.
Joseph H. Marvin,	Rockwell Street.
Patrick H. Raymond,	Jay Street (Sec. of Board).

Cambridge Steam Fire Engine Company, No. 1.

House on Church Street, Ward I.

Ai Rollins,	*Foreman.*
Elbridge E. Knight,	*Assistant Foreman.*
Edward E. Priest,	*Engineer.*
William T. Gibson,	*Fireman.*
Hiram W. Hooker,	*Driver.*
F. B. Pullen,	*Driver of Hose Carriage.*

Hosemen.

John Kinnear,	William Woodland,
Warren Ivers,	John H. Sanderson,
George O. Rollins,	William H. McMann,
O. E. Allen,	Charles Farwell.

Condition of House and Apparatus.

House, Engine with all the Equipments, 24 feet of Suction Hose, 2 Horses, 3 Harnesses, Horse Hose Carriage, 1250 feet double-riveted Leather Hose, 2½-inch, 150 feet single-riveted, 225 feet 6-ply Rubber, 2 Pipes, 4 Buckets, 1 Axe, 2 Blunderbusses, in good condition ; 1 Horse ordinary.

Engine built by Amoskeag Manufacturing Company, Manchester, N. H., and put in service September 18, 1864.

All our steamers are of one pattern, and of the second class, have one steam cylinder $8\frac{1}{2}$ inches in diameter, one double-acting vertical plunger pump of $4\frac{3}{4}$ inches diameter, with 12-inch stroke.

They will discharge 400 gallons of water per minute, if required; will throw two $\frac{7}{8}$-inch streams 210 feet each, or one $1\frac{1}{8}$-inch stream 250 feet. Two copper tanks are attached containing fresh water, with which to furnish the boiler when using salt water upon a fire. With fuel and water, as run to fires, weight about 6,000 pounds. The Horse Hose Carriages, which accompany the Engines, were built by Messrs. Hunneman & Co., of Roxbury. They are two-wheeled, and capable of carrying 900 feet of Hose; weight, as run to fires, 1,600 pounds.

An Engineer, Driver of Steamer, and Driver of Hose Carriage are permanently employed. These, together with a Fireman and ten Hosemen, constitute the entire company of a Steamer. Sleeping accommodations are furnished for one member in addition to those permanently employed.

Union Steam Fire Engine Company, No. 2.

House on Main, near Winsor Street, Ward IV.

William Cade,	*Foreman.*
Thomas H. Lucy,	*Assistant Foreman.*
William Nicholson,	*Engineer.*
Nathan Hutchinson,	*Fireman.*
John Walker,	*Driver.*
Joseph Cartwright,	*Driver of Hose Carriage.*

Hosemen.

Daniel McCarty,	Thomas Wiseman,
Simon Hitchcock,	George W. Lamson,
Eldorado Osborn,	Amos Jarvis,
William Foss,	Charles Snow.

Condition of House and Apparatus.

House, Engine with all the Equipments, 34 feet of Suction Hose, 3 Horses, 4 Harnesses, Horse Hose Carriage, 1,550 feet $2\frac{1}{2}$-inch double-riveted Leather Hose, 50 feet single-riveted, 2

Pipes, 3 Buckets, 1 Axe, 2 Blunderbusses, in good condition ; 300 feet Rubber, 200 feet 2-inch Leather, ordinary.

Engine built by Amoskeag Manufacturing Company, Manchester, N. H. ; put in service August 1, 1863.

Fuel Wagon housed on Cherry Street, near Main Street.

Niagara Steam Fire Engine Company, No. 3.

House on Cambridge, near Third Street, Ward III.

William M. Loring,	*Foreman.*
Henry Baker,	*Assistant Foreman.*
Hiram Blood,	*Engineer.*
Moses Dudley,	*Fireman.*
James S. Casey,	*Driver.*
Lorenzo Dale,	*Driver of Hose Carriage.*

Hosemen.

Samuel M. Dustin,	Francis P. Carr,
J. W. Ellis,	William Newman,
Wm. W. Winward,	Joseph Rogers,
Thomas Howard,	Thomas J. Dale.

Condition of House and Apparatus.

House, Engine with all the Equipments, 24 feet of Suction Hose, 3 Horses, 3 Harnesses, Horse Hose Carriage, 400 feet double-riveted Leather Hose, 100 feet Canvas, 2 Pipes, 3 Buckets, 1 Axe, 2 Blunderbusses, in good condition ; 900 feet double-riveted Leather Hose, 100 feet single-riveted, 100 feet Rubber, ordinary.

Engine built by Amoskeag Manufacturing Company, Manchester, N. H. ; put in service September 18, 1862.

Hydrant Engine Company, No. 4.

House at Junction of Western Avenue and River Street, Ward IV.

Daniel R. Melcher,	*Foreman.*
Albert Norris,	1*st Assistant Foreman.*
Samuel Wentworth,	2*d Assistant Foreman.*
Hiram Corson,	*Clerk.*
Joseph Pierce,	*Steward.*

John Jenness,	Thomas Dolan,
William Norris,	A. J. Crown,
Nathaniel Ham,	Thomas Day,
William H. Jenness,	Lewis P. Jenness,
Samuel Ham,	Richard H. Marvin,
Myron W. Harwood,	William Freeman,
Andrew J. Ayers,	William E. Cole,
Samuel W. Jenness,	Michael Griffin,
John W. Walker,	James H. Lee,
Charles F. Swett,	John S. Carrol,
Benjamin F. Watts,	John G. Hicks,
William N. Megroth,	George L. Jenness.
John Ham,	

Condition of House and Apparatus.

House, Engine, 22 feet of Suction Hose, 2 Buckets, 1 Pipe, 1 Blunderbuss, 3 Axes, Hose Carriage, 175 feet 2½-inch Leather Hose, 700 feet of 2-inch in good condition ; 225 feet ordinary.

Engine built by Hunneman & Co. It is of their most improved pattern, stern suction, outlets for two streams, 5½-inch cylinders, and rests on springs.

Daniel Webster Engine Company, No. 5.

In Shed, near Porter's Hotel, North Avenue.

Daniel O'Connell,	*Foreman.*
Henry K. Parsons,	*1st Assistant Foreman.*
William S. Woods,	*2d Assistant Foreman.*
William T. Henderson,	*Clerk.*
Francis H. White,	*Steward.*

E. Griffin,	S. M. Parsons,
W. Coleman,	Frank Presby,
J. L. Norris,	J. A. Parsons,
John Henderson,	Frederick A. Gerry,
Augustus Sproul,	William Bryant,
Henry Muller,	Charles Sanborn,
Charles Marston,	William Friend,
D. D. Claflin,	Francis Mason,
Charles W. Parkhurst,	James Cary,
Christian Muller,	Levi D. Hall,
Matthew Persell,	James H. Presby,
A. C. Griffin,	P. W. Gargan,
John Powers,	Edward Boardman,
James Wakefield,	Edward Gilman,
Joseph Eaton.	Raymond Lynes.

Condition of House and Apparatus.

House being rebuilt for Steamer; Engine, 27 feet of Suction Hose, 4 Buckets, 1 Pipe, 2 Axes, 1 Blunderbuss, Hose Carriage, 100 feet 2½-inch Canvas, 200 feet 2½-inch single-riveted Hose, 250 feet 2-inch, in good condition; 1 Hose Carriage, 500 feet 2-inch Hose, ordinary. Engine built by Howard & Davis.

Hand Engine No. 2 and Hose Carriage are stored in Pioneer Engine House, and kept for relief purposes. Hand Engine No. 3, and Hose Carriage, are in a building connected with the N. E. Glass works.

Franklin Hook and Ladder Company, No. 1.

House on Main, near Winsor Street, Ward IV.

Thomas Drinan,	*Foreman.*
George W. Tower,	1*st Assistant Foreman.*
Charles E. Warren,	2*d Assistant Foreman.*
E. A. Hall,	*Clerk.*
James P. Ewell,	*Steward.*

William F. Ewell,	Charles Emerson,
Charles D. Nealey,	Lewis C. Clark,
Jackson E. Hall,	Israel Woodbury,
James Cunningham,	Albert March,
James R. Bowdley,	Alonzo Colby,
David W. Hill,	Cyrus Chapman,
Elias Jones,	Curtis Edgely,

Benjamin T. Marble.

Condition of House and Apparatus.

House, Carriage, 17 Ladders of various lengths, from 10 to 36 feet, 1 Splice Ladder 52 feet in length, 3 Guy Ropes, 8 Buckets, 3 large Fire Hooks with chain and rope attached, 2 Small Hand Hooks with poles, 4 Chain Dogs, 4 Fire Rakes, 7 Pitchforks, 4 Axes, 6 Crotch Poles, 1 Crow-bar, 1 Saw, 2 Harnesses, 1 Wrench to Reservoir supply pipes, 1 Horse in good condition ; 1 Horse ordinary.

One long ladder is kept in a shed attached to the fence in the yard of the First Methodist Society, Third Street, Ward III., also a Fire Hook, the rope to which is kept in No. 3 Engine House. Two Long Ladders and a Large Hook are kept near the Engine at North Cambridge.

In addition to the articles herein described, the Companies are furnished with the requisite number of Badges, Keys, Fire Hats, Belts and Spanners, Signal Lanterns, Hand Lanterns, Crow-bars, Hydrant Wrenches, Goose-necks, Reducing Couplings, and all the necessary apparatus for use in the performance of their respective duties.

Fire Police.

George S. Pike, Ward II.
Moses Ricker, Ward IV.

Hunneman Engine Company, No. 7.

House on Church Street, Ward I.

Edward F. Belcher, *Foreman.*

The duties of this Company are confined more particularly to the Ward, but they render assistance in other parts of the City when required. They receive $240 per year to defray incidental expenses and salary of steward, and $8 per hour for services rendered. The Company comprises forty-one members, and is useful in this locality.

The Apparatus in their charge, Engine, Hose Carriage, 875 feet 2½-inch Leather Hose, is in good condition.

RESERVOIRS.

A star [*] indicates those furnished with supply pipe.

LOCATED IN WARD ONE.

Corner Main and Dana Streets.
Mt. Auburn Street, foot of Linden St.
*Mt. Auburn, opp. Orthodox Church.
*Corner Brighton and Eliot Streets.
Brattle Street, South end Appian Way.
*Garden Street, North end Appian Way.
Junction Garden Street and Concord Avenue, opposite Arsenal.
North Avenue, near junction Waterhouse Street.
Square, front of house of late Dr. Holmes.
Kirkland, opposite Oxford St.
Sumner Street, opposite residence of Mr. Lerned.
Cambridge Street, nearly opposite Sumner Street.
Prescott Street, near J. D. Green's barn.
Bow Street, centre of Square.
College Yard.

LOCATED IN WARD TWO.

*Junction Main Street and Broadway.
Pioneer Street, front of School-house.
*Corner Harvard and Davis Streets.
*Broadway, corner of Winsor Street.
*Harvard Street, head of Cherry.
*Harvard St., opposite Burial-Ground.
*Corner Harvard and Prospect Streets.
Corner Essex and Austin Streets.
Corner Main and Hancock Streets.
Broadway, head of Tremont Street.
*Norfolk Street, midway between Broadway and Hampshire Street.
*Corner Harvard and Columbia Streets.
*Austin St., between Temple and Inman.
*Corner Inman and Harvard Streets.
*Corner Clark and Hampshire Streets.
*Corner Webster Ave. and Cambridge Street.
*Corner Tremont and Gardner Streets.
Corner Washington and Cherry Streets.
*Prospect Street, 175 feet north of Broadway.

LOCATED IN WARD THREE.

*Front of Hotel, junction Bridge and Gore Streets.
*Corner Gore and North Third Streets.
*Cambridge Street, 70 feet east of Third Street.
Corner South Sixth and Spring Sts.
Under N. England Glass Co.'s Building.
*Corner Otis and Fourth Streets.
Corner Cambridge and South Fifth Sts.
*Corner Thorndike and Third Streets.
New England Glass Co.'s Yard.
Winchester's Factory Yard.
Under Lowell R. R. Machine Shop.

LOCATED IN WARD FOUR.

*Corner Washington and Harrison Sts.
East end of School Street, near Brooks's Buildings.
Main St., 50 feet west of Car Factory.
Main St., near Hovey's Bacon Works.
Corner School and Cherry Streets.
Corner Brookline and Auburn Streets.
Corner Pearl and Franklin Streets.
*Junction Western Avenue and Pleasant Street.
*Corner Magazine and Williams Streets.
Main Street, near Liberty Pole.
*Corner Main and Brookline Streets.
*Corner Austin and Douglass Streets.
*Pearl St., near Jones & Co's Factory.
*Main Street, Junction of Western Avenue and River Street.
Corner Main and Austin Streets.
Green Street, opposite house of Daniel Stone.
Main Street, east side of D. Osborn's Factory.
Corner Washington and Pine Streets.

LOCATED IN WARD FIVE.

In Square opposite Porter's Hotel.
N. Avenue, near Engine House No. 5.

HYDRANTS.

A star [*] indicates 3-inch hydrants.

LOCATED IN WARD ONE.

On Brattle Street, opp. the line between Messrs. Longfellow and Hastings.
Corner Brattle and Ash Streets.
Corner Brattle and Hilliard Streets.
On Brattle St., corner Brattle House estate.
On Harvard St., opp. Harvard Block.
Junction of Main and Harvard Streets.
Corner Main and Trowbridge Streets.
Corner Harvard and Remington Sts.
On Cambridge St., front Scientific Sch.
Corner Cambridge and Sumner Streets.
Corner North Avenue and Chauncy St.
Mt. Auburn, opposite McClellan Street.
Corner Cambridge and Baldwin Streets.
*Corner Appleton and Highland Streets.
Corner Church and Palmer Streets.
Corner Garden and Mason Streets.
Junction Waterhouse Street and Concord Avenue.
Corner Mt. Auburn and Brighton Sts.
Corner Mt. Auburn and Howard Sts.
Corner Dunster and South Streets.
On Kirkland Street, opp. Divinity Hall Avenue.
On Oxford Street.
Corner North Avenue and Shepard St.
Between the rails of R. R. track, in front of Lyceum Hall.
Corner Phillips Place and Berkeley St.
Craigie, near corner Sparks Street.
*Corner Brattle and Lowell Streets.
*Junction Broadway and Cambridge St.
*Corner Broadway and Prescott Street.
*Corner Broadway and Trowbridge St.
*Concord Avenue, opposite Craigie St.
*Corner Broadway and Quincy Street.
*Corner Broadway and Ware Street.
*Corner Broadway and Ellery Street.
*Corner Foster and Sparks Street.
*Corner Mellen and Oxford Streets.

LOCATED IN WARD TWO.

Corner Main and Lee Streets.
Corner Main and Hancock Streets.
On Moore, head of Hastings Street.
Corner Washington and Clark Streets.
Corner Harvard and Clark Streets.
On Norfolk St., head of Washington St.
On Essex Street, westerly side, midway between Harvard and Austin Streets.
On Cambridge Street, north side, near junction of Hampshire and Cambridge Streets.
On Main, opposite Pleasant Street.
Corner Main and Essex Streets.
Corner Winsor and Lincoln Streets.
Corner Winsor and Hampshire Sts.
On Cambridge St., cor. Willow Place.
On Cambridge Street, opposite the head of Maple Avenue.
Corner Broadway and Davis Street.
Corner Harvard and Hancock Streets.
Corner Harvard and Dana Streets.
Corner Columbia and Washington Sts.
*Corner Winsor and Washington Sts.
On Prospect Street, opp. B. Tilton's.
Corner Prospect Street and Broadway.
Corner Prospect and Hampshire Sts.
Corner Norfolk and Hampshire Streets.
On Tremont Street, near Wellington's House.
Main, corner of Dock Street.
Corner Market and Union Streets.
*Corner Broadway and Dana Street.
*Corner Broadway and Ellsworth Ave.
*Corner Broadway and Fayette Street.
*Corner Broadway and Amory Street.
*Corner Broadway and Norfolk Street.
*Corner Broadway and Boardman St.
Broadway, opposite Tucker's Factory.
*Centre St., opp. Dana School-house.
*Corner Broadway and Hancock Street.
*Corner Broadway and Antrim Street.
*Corner Broadway and Tremont Street.
*Corner Broadway and Elm Street.
*Junction Broadway and Hampshire St.
*Corner Broadway and Dock Street.
*Corner Broadway and Court Street.

LOCATED IN WARD THREE.

Corner Cambridge and Sixth Streets.
Corner Cambridge and Third Streets.
Junction Cambridge and Bridge Sts.
On Bridge Street, opposite Wellington's counting-room.
*On North Street, near Glass Co.'s cutting-shop.
On Bridge Street, south side, opposite the head of Water Street.
Corner Third and Vine Streets.
*Corner Cambridge Street and Franklin Alley.
Corner Gore and Lambert Streets.
*Court opposite Kerosene Works.
Corner Fifth and Gore Streets.
Corner Second and Otis Streets.
On Bridge Street, opposite Bay State Glass House.
Corner Otis and Seventh Streets.
Corner Thorndike and Sixth Streets.
Corner Thorndike and Fifth Streets.
Corner Gore and Fourth Streets.
Corner Spring and Fourth Streets.
*Corner Otis and First Streets.
*Corner Fifth and Charles Streets.
*Corner Fifth and Spring Streets.

LOCATED IN WARD FOUR.

Corner Main and Columbia Streets.
Near junction of Main and Austin Sts.
Corner Main and Winsor Streets.
Junction of Front and State Streets.
On Washington Street, near east end.
On Main St., opp. Brooks's Buildings.
On River, opposite Cottage Street.
On River, opposite Harrison Avenue.
Corner Western Avenue and Jay St.
Corner Pleasant and Walnut Streets.
Corner Pleasant and Somerset Streets.
Corner Pleasant and Park Streets.
Corner Pleasant and Webster Streets.
Corner Pleasant and Green Streets.
Corner Pleasant and Franklin Streets.
Corner Pleasant and Prince Streets.
Corner River and Franklin Streets.
Corner Pearl and Cottage Streets.
Corner Pearl and Auburn Streets.
Corner Brookline and Franklin Streets.
On Main Street, north side, opposite Kennedy's Bakery.
Foot of School Street.
Magazine, near Short Street.
Corner Main and Norfolk Streets.
Corner Franklin and Soden Streets.
Corner Franklin and Hancock Streets.
Corner Franklin and Bay Streets.
Franklin, near the hill.

LOCATED IN WARD FIVE.

Between rails of railroad, opposite office door.
On North Avenue, opp. Linnæan St.
*On North Avenue, cor. Chester Street.
*Garden, opposite Bond Street.
*Corner North Av. and Arlington St.
*North Avenue, near Gerry's saloon.
*North Avenue, cor. Coggswell Avenue.
*Corner Linnæan and Avon Streets.
*Corner Linnæan and Bowdoin Streets.
*Corner North Avenue and Allen St.
*Corner North Avenue and Willow St.
Corner North Avenue and Rice Street.

FIRES AND ALARMS FROM DECEMBER 18, 1867, TO DECEMBER 18, 1868.

Date.	Owner or Occupant.	Description.	Situation.	Loss.	Insurance.	Causes.
1867.						
Dec. 31	D. Osborn	Shavings in boiler-room	Foot of State St.	–	–	Took from furnace.
1868.						
Jan. 14	Wm. P. Butterfield	Dwelling-house	Main St.	Trifling	–	Sparks from chimney.
Jan. 21		Alarm	Somerville	–	–	Fire in Somerville.
Jan. 24	Lincoln & Co.	Kerosene oil-works	Court St.	Trifling	–	Oil ignited by gas from furnace.
Jan. 29		Alarm	Somerville	–	–	
Feb. 6	Wm. Reed	Two story wooden building Furniture and upholstery	Brighton St.	$700	$700	Unknown.
	Harris & Blaisdell	Stock in above	Brighton St.	840	840	
Feb. 24	Edw. Hyde and others	Two story wooden building and stock	Main near Prospect St.	4,175	3,425	Unknown.
Mar. 3	City of Cambridge	Gannett School-house	Columbia St.	1,800	1,200	Took from furnace.
April 8	T. Parsons	Smoke in dwelling-house	Garden St.	–	–	Soot in funnel took fire.
April 11	Frank Becker	Greenhouse plants	Main near Putnam	4,000	–	Heating pipe in contact with floor.
April 19		Grass	Portland St.	–	–	By boys.
April 22		Brush	Brookline St.	–	–	Burning of brush and weeds.
April 25	John Hartwell	Bed	Short St.	–	–	Unknown.
May 2		Alarm	Medford	–	–	Fire in Medford.
June 1	Boston Silver Glass Co.	Coal in glass-house	Broadway	Trifling	–	Bursting of pot.
June 1	Mrs. W. Colburn	Dwelling-house	Ash St.	Trifling	–	Rags took fire spontaneously.
June 4	D. Shea	Smoke in tailor's shop	Brighton St.	–	–	Chimney stopped up.
June 9		Alarm	State St.	–	–	Bursting of boiler in D. Osborn's mill.
June 16	W. Cushing	Dwelling-house	Mt. Auburn St.	Trifling	–	Unknown.
June 17	John Livermore	Box factory	Foot of Court near Lowell Railroad	5,300	3,750	
June 19	Leighton Bros.	Car factory	Main St.	Trifling	–	Sparks from furnace.
June 21	Dover Stamping Co.	Blacksmith's shop	Pleasant St.	Trifling	–	Hot ashes in box.
June 26	Joseph Eames	Dwelling-house	Mt. Auburn St.	Trifling	–	Unknown.
June 28	Beal & Hooper	Shavings in boiler-room	Cambridge St.	Trifling	–	Shavings took from furnace.
June 28	James V. Bates	Dwelling-house	Church St.	Trifling	–	Sparks from chimney.
July 25	Horace Fisk	Dwelling-house	Broadway	1,175	1,175	Sparks from foundry opposite.
July 27	Lincoln & Co.	Kerosene works	Court St.	–	–	Oil took fire.
July 29	Farley & Hill	Unoccupied glass-house	Court St.	7,500	500	Incendiary.
Aug. 14	John McCaffrey	Barn	Court St.	Trifling	–	Incendiary.
Aug. 24	Horace Fisk and others	Blacksmith and Wheelwright's shop	Main St. L. Port	2,250	900	Unknown.
Sept. 21	Patrick McDonald	Shed	Dublin St.	–	–	Unknown.
Sept. 22	Patriek McDonald	Dwelling-house	Dublin St.	Trifling	–	Supposed carelessness.
Sept. 22	Thos. Murphy	Dwelling-house	Cedar St.	1,800	900	Unknown.
Oct. 29	Peter Tumulty	Salt hay	Franklin St.	Trifling	–	Supposed by boys.
Nov. 7	Hyde & Young	Lumber over boiler	Brighton St.	Trifling	–	Took from furnace.
				$29,540	$13,390	

RECAPITULATION.

Number of Engineers		5
Members		128
Fire Police		2
Steam Fire Engines		3
Hand Fire Engines		5
Horses		11
Horse Hose Carriages		3
Hand Hose Carriages		6
Feet of Suction Hose		209
Buckets		25
Pipes		9
Axes		11
Feet of Leading Hose		7,950
Hook and Ladder Carriage		1
Ladders		20
Large Hooks with Chain		5
Hand Hooks with Poles		4
Crotch Poles		6
Fire Rakes		4
Pitchforks		7
Fire Hats		62
Reservoirs		65
Hydrants		137
Alarms from Fires in City	29	
Alarms from out of City	3	
Alarms from other causes	3	
	—	35
Loss on Buildings and Stock	$29,540	
Insurance on Losses	13,390	
	———	$16,150

REPORT

OF

GEORGE L. CADE,

SUPERINTENDENT OF STREETS AND DRAINS.

City of Cambridge, *December* 15, 1868.

To the Honorable City Council: —

The undersigned asks leave to submit for your consideration his Fifth Annual

REPORT.

Streets and Paving.

The appropriation for Streets and Paving for the financial year ending November 30, 1868, was . . .	$40,000.00
Expended	39,988.18
Balance unexpended	$11.82
Amount received and paid to Treasurer . .	$889.26

The streets and sidewalks of the City are not in so good a condition as I would wish to have them. The principal reasons for their not being in better order are the want of means, the large amount of new work that has been done, and the very wet season that we have just passed through; I might also add the constant digging up of the streets for the laying of water and gas pipes. I would again urge the necessity of making a commencement of the work of paving each year a portion of the road-way of Main, Cambridge, and Bridge streets, and also the street leading over Prison Point Bridge, which is in a very bad condition, and must necessarily be so until a sewer is laid, so that the surface water

can be taken care of, after which the street should be paved. It will be economy for the City to expend a large amount of money on each of these streets the coming season for paving. I would also recommend that edge-stones be set on both sides of Main Street, from West Boston Bridge to Harvard Street in Ward One, and thence to Harvard Square, and that a brick or concrete sidewalk be laid the entire length, at least upon one side. I would again respectfully request the City Council to take some action toward purchasing or leasing a wharf at the Lower 'Port for the landing of edge-stone, block and paving stone, so that a supply can constantly be kept on hand, and, by purchasing by the cargo, a great saving can be made, as is invariably done by the City of Boston. During the past year there have been 19,700 yards of paving done, and 18,690 feet of edge-stone set, at a cost, including the grading, of upwards of twenty thousand dollars, many of the jobs requiring a large amount of filling. One of them was the widening of Main Street, which has been a great public improvement. The regular force employed by the City in the street department at the present time is thirty-four men and fifteen horses. The men are employed by the month, with but two exceptions, and in stormy weather work at breaking stone, etc., in the yard, with the stone-crusher, which I am pleased to say still continues to be one of those labor-saving machines which I now consider it would be almost impossible to dispense with in this department. The cost of repairs on engine and machine during the past year has been but one hundred and twenty-five dollars and twenty-three cents, and there have been over five thousand tons of stone crushed the past year. In order to meet the demands of this department I must urgently request that the appropriation for streets and paving the coming year be not less than sixty thousand dollars.

Bridges.

The appropriation for Bridges for the financial year ending November 30, 1868, was	$15,000.00
Amount expended	7,653.11
Balance unexpended	$7,346.89
Amount received and paid to Treasurer	$542.16

The several bridges of the City are in good order with the exception of West Boston and Canal Bridges. Extensive repairs must be made on both of these the coming season in the way of paving, and also in repairs of the draw on West Boston Bridge. Some improvement has been made this year, but it is a cumbersome and heavy thing to manage, and I would earnestly recommend the putting in of a new draw, with but one passage-way for vessels. I would also suggest for your consideration the propriety of removing the sidewalk on the southerly side of this bridge, and having both railroad tracks upon the north side of the road-way, which will give a good carriage-way, and in the winter season there will not be that objection to the removal of the snow which there is at present. And I would also recommend the repaving of a portion of the same with the Stafford Wooden Pavement, or with small granite blocks, believing that the public would willingly pay the extra expense for so great an improvement. I would recommend that the appropriation for bridges the coming year be not less than ten thousand dollars. If a new draw is put in, this will not be sufficient.

Schedule of Personal Property belonging to Street Department.

Eleven Carts	$825.00
Fourteen Horses	4,900.00
Fifteen Cart Harnesses	450.00
One Wagon and Harness	240.00
One Wagon	250.00
Four Sleds	300.00
One Stone Roller	75.00
One Plough	10.00
Utensils for work on streets and drains	275.00
Stable Furniture	100.00
Stone-crusher and Steam-engine	3,000.00
Nine Snow Ploughs	108.00
	$10,533.00

Respectfully submitted,

GEORGE L. CADE,

Superintendent of Streets.

RESERVOIRS AND DRAINS.

The appropriation for Reservoirs and Drains for the financial year ending November 30, 1868, was	$12,000.00
Amount expended	10,793.64
Balance unexpended	$1,206.36
Amount received and paid to Treasurer	$60.70

The following is a list of the Drains constructed the past season, with their length, capacity, and cost: —

Western Avenue from Howard to Franklin Streets.

1267 feet long; 722 feet of brick, size 22×28 inches; 314 feet of brick, size 16×20 inches; 231 feet of drain pipe, 9 inches. Cost $3,787.65

Pleasant and Green Streets.

800 feet long; 383 feet of brick, size 15×18 inches; 417 feet of drain pipe, size 10 inches. Cost . $993.01

Suffolk Street.

443 feet long, size 12-inch drain pipe. Cost . . $522.50

Inman Street.

580 feet long, size 12-inch drain pipe. Cost . . $707.92

Chauncy Street.

548 feet long, size 12-inch drain pipe. Cost . . $624.57

There have been 60 feet of 12-inch drain pipe laid in First Street, connecting with the First Street sewer, and running northerly, turning the corner of Cambridge Street, at a cost of $80.00.

There has also been a sewer constructed in part in Putnam Street, running northerly from Western Avenue about 975 feet,

with a 9 and 10-inch drain pipe, at a cost of $1,100.14. On account of the lateness of the season, I did not deem it expedient to finish this drain until spring: the soil being of clay it would have been almost impossible to replace it in good order on account of freezing. There was also an order passed for the connecting of the sewers in Broadway, but I was not able to do it this season. The pipe for this purpose is on hand, and it will be done early in the spring.

Whole amount expended on new drains . . .	$7,309.84
Amount expended on drains previously constructed for cesspools and reservoirs	3,483.80
Whole amount expended	$10,793.64

The appropriation for Reservoirs and Drains for the coming season should not be less than forty thousand dollars, if it is proposed to build the large sewer in the First Ward. It will require at least fifteen thousand dollars in this department, without considering the cost of the Oxford Street sewer so called.

I would here add to this report that an almost entire new system has been commenced in the construction of sewers, that is, by using drain pipe instead of brick. I am satisfied that it is economy to do so, as they can be laid much cheaper, and are better than brick. They are now used altogether, where the size will admit of it, in the cities of New York, Brooklyn, and Jersey City, and have been in general use for many years in Europe, and now form the most improved system of sewerage known. And I will here quote the following extract from a report of James P. Kirkwood, Esq., Engineer of New York, as to their merits: —

"For the flow of sewerage the glazed pipe is far superior to the brick sewer. The pipe sewer has a joint every thirty-six inches; the brick sewer has a joint every eight and a half inches longitudinally, and every two and a half inches transversely. These mortar joints do not always remain tight. Whether from the use occasionally of ill-prepared mortar, or by some action of the sewerage upon the mortar, they frequently leak. If the leakage is inward, it will assist the flow, but if the leakage is outward, as will generally be the case in our City, it deprives the heavy matter of the sewerage proper of its fluid motor, and must lead to some

settlement or deposit on the bottom as a matter of course. The roughness of all brick sewers, however well built, compared with pipe sewers, and the foothold they give to rats, might well lead us to dispense with their use, except for sizes where the more perfect mode becomes impracticable or unsafe."

Such testimony as the above (and I might quote pages in proof of it) must be considered reliable as to their utility. And I would respectfully recommend the exclusive use of pipe in all sewers where the size is not required to be more than two feet.

Respectfully submitted,

GEORGE L. CADE,

Superintendent of Drains.

REPORT

OF

THE CHIEF OF POLICE.

OFFICE OF CHIEF OF POLICE,
CAMBRIDGE, *December*, 1868.

To the Honorable the Mayor and Aldermen of the City of Cambridge: —

GENTLEMEN, — I have the honor to submit my Fifth Annual Report, presenting the doings of the Department for the financial year ending November 30, 1868.

Whole number of arrests during the year		1419
Males	1,227	
Females	192	
Residents	1,063	
Non-residents	356	
Adults	1,220	
Minors	199	
Whole number of lodgers during year		1,136
Males	973	
Females	163	
Total number		2,555

Nature of Offense.

Adultery	1
Assault and Battery	177
Assault on Officers	2
Assault felonious	2
Attempt to break and enter	1
Attempt to pick pocket	1
Arson	2
Bastardy	8

Breaking and entering	9
Common Beggars	5
Common Drunkards	21
Cruelty to Animals	5
Drunkenness	692
Disturbing peace	92
Disturbing public schools	2
Disturbing religious meeting	3
Escaped convicts	7
Embezzlement	1
Fast Driving	1
Fornication	1
Forgery	1
Gaming on Lord's Day	17
Insane	26
Indecent exposure of person	3
Keeping liquor nuisance	7
Keeping dogs without license	5
Keeping noisy and disorderly house	3
Larceny	99
Lewdness	3
Malicious mischief	47
Obstructing horse-cars	1
Obtaining money on false pretenses	3
Perjury	1
Robbing hen-roost	1
Receiving stolen property	5
Rescuing cow from pound	1
Rape	1
Stubborn children	3
Surety of peace	27
Suspicious persons	6
Selling mortgaged property	1
Truants, habitual	16
Unlicensed peddlers	5
Vagabonds	32
Violation Lord's Day	21
Violation City Ordinances	45
Willful trespass	6

The number of arrests was 249 more than for the previous year, and the number of lodgers 130 more. It will be observed by referring to the causes for which arrests were made, that more than fifty per cent. are for the crime of drunkenness. Every tax-payer, therefore, as well as every philanthropist, has a deep interest in its diminution. But how to diminish it? That problem has not proved easy of solution. Legislation alone has not proved successful, and the subject is an embarrassing one. Whether the existing laws on this subject are the best adapted to secure what every friend of his race must ardently desire, is a question on which there is room for difference — for honest difference of opinion. But upon some things all good men must agree. Life and property must be secure from violence and injury; female innocence must be protected from insult and alarm; the public streets must be free from rowdyism and disturbance; the sacred season of the Lord's Day must not be disregarded, nor the hours usually devoted to sleep and quiet broken up by nocturnal brawls. These things our constituents demand, whosoever's trade or business is thereby affected.

Entertaining, as I have done, and shall continue to do, a deep interest in the success of our police organization, I trust your honorable body will not deem it inappropriate in me to offer a few suggestions embodying somewhat the results of my experience and observation. I would respectfully suggest the necessity of an increase of the numerical strength of the force; the experience and business of the year just closed give me confidence in making this suggestion, as the largely increased population and the area of territory to be guarded in the night-time is quite too large for the present number of our night patrol force. Although the City is divided into beats, and traversed regularly by the night watchmen, there are certain populous portions of the City that are not so well cared for as I believe they should be. During the past municipal year three of the night officers were taken from their beats and placed in the station-houses, one in each of the police districts, leaving the beats, then too large, to be added to the remaining night force. There are on night duty in the first police district eight men, in the second district seven, and in the third four men; this division, which is believed to be as equal as it can be, gives the whole of that populous portion of the City southerly of Main

Street, from Putnam Street to the Grand Junction Railroad, only two night patrol men, and there are other portions of the City alike imperfectly provided for.

The present system of making police appointments produces many and frequent changes, and does not, I believe, give the best results. A police officer, before he can become an adept in the business, must have experience. Even a man naturally qualified for the position requires familiarity with the duties, before he can serve the City to the best advantage. The tenure of office is now so uncertain that officers are not stimulated to attain that proficiency which they might under more favorable circumstances. I would therefore again suggest, whether the appointment of patrol men during good behavior, and removable at the pleasure of the Mayor, would not be a judicious measure?

I would recommend that the present compensation paid to the members of the department be continued, so that good men may be secured, and their whole time be devoted to the performance of their duties and the best interests of the City.

The increased efficiency which I hoped would follow the uniforming of the police has, I think, been attained. That the measure is useful and acceptable both to the officers and citizens I am confident.

The department is in good condition; changes may be made of some of the men, and perhaps in some instances with advantage to the department.

There have been received from the Police Court for my fees on warrants, and for officers' fees as witnesses, $2,861.63, all of which has been paid into the City Treasury.

By reference to the arrests it will be observed that twenty-five per cent. are non-residents, and in this connection I think I may venture to use a quotation from the inaugural address of a late Mayor of our City as applicable to the present time: —

"The department of the Government on which the Executive must rely for the preservation of public order, the protection of the citizens, and the execution of the laws and ordinances of the City, is the Police.

"It is that of which most men think themselves competent to judge; that from which the most seems to be expected, and for which the least allowance is generally made.

"That there should be no breaches of the peace, no thefts or burgla-

ries committed, no violations of law or ordinance, is an expectation which, under the best government on earth, no knowledge of human nature would permit us to entertain. Compare our own condition in this respect with that of any of our neighbors, and I believe it will not be to our disadvantage. The peculiar exposure of our situation should be borne in mind, — in the immediate vicinity of a large seaport, the metropolis of all New England crowding out upon us its surplus population, and particularly that class which supplies the largest proportion of criminals. I doubt whether we can find a community in the world of equal population and similarly situated where there is enjoyed a greater degree of security for person and property."

I am happy to bear testimony to the faithful manner in which the officers have performed their duties, and to the ever ready and cheerful discharge of all special orders they have been called upon by me to execute.

Respectfully submitted,

FORDYCE M. STIMSON,
Chief of Police.

REPORT

OF

ROLAND LITCHFIELD,

SUPERINTENDENT OF LAMPS.

To his Honor the Mayor and Board of Aldermen of the City of Cambridge: —

GENTLEMEN, — I herewith submit my Annual Report in relation to the Lamp Department.

The number of Street Lamps is as follows: —

District One,	198 gas,	3 fluid.		
District Two,	209 gas,	60 fluid.		
District Three,	76 gas,	35 fluid.		
	483	98	Total . .	581

Twenty-nine of the above were added during the year.

The following is an exhibit of the expenses of the Street Lamps for the year: —

For gas and excise duty	$6,908.74
For lighting	2,892.32
For fixtures and repairs	892.31
For naphtha, matches, and wicking . .	561.36
For glass, putty, etc.	205.95
For salary of Superintendent . . .	200.00
	$11,660.68

The average cost for each lamp burning gas through the year was six cents and one and a half mills per night, and the average cost of each lamp burning naphtha was two cents and two mills per night.

Six men are employed to light the lamps and keep the lanterns clean, and they are paid forty-two cents per month for each lamp.

Respectfully submitted,

ROLAND LITCHFIELD,
Superintendent of Lamps.

CAMBRIDGE, *December* 1, 1868.

REPORT

OF

JOSIAH G. CHASE,

CITY ENGINEER.

OFFICE OF CITY ENGINEER, *December* 15, 1868.

To the City Council : —

GENTLEMEN, — In compliance with the third section of the ordinance establishing the office of City Engineer and Surveyor, the following second annual report relating to my department is respectfully presented.

Sewers.

Five thousand one hundred and thirty-five and eight tenths feet of sewerage have been constructed the past season, located as follows: —

	Feet.
Western Avenue, extension of main sewer,	1,277
Pleasant Street, branch from Western Avenue,	504
Green Street, branch from Pleasant,	302.8
Suffolk Street, branch from Columbia,	445
Inman Street, branch from Harvard,	580
Chauncy Street, branch from North Avenue,	538
Otis Street, extension of small sewer,	485
Putnam Street, branch from Western Avenue, about	939
Cambridge Street, branch from First, about	65

The two latter drains are not as yet completed. The construction of sewers is not under my supervision or special direction, except so far as to comply with the orders, passed by the City Council, directing surveys and plans for the same; which have been

carefully prepared, with profiles showing their location and abutting estates for assessment. During the building of each sewer, levels have been supplied the Superintendent for reference, and care has been maintained as to grade and direction. A larger amount of money was appropriated and has been expended the past season, than in any one previous year, and commendable progress has been made toward securing more complete schemes for drainage; but there yet remain the most important steps to be taken, in order to secure the great benefits to be derived from a thorough system of sewerage. To meet the increasing demands, large appropriations are necessary, both for the present and future welfare of the City. The construction of main sewers of different character and capacity are essential. The only work of importance this year has been the building of the Western Avenue main, 28×22, between Howard and Soden Streets. The material met with on this route was not favorable to cheap or expeditious construction; but now that the work is accomplished, we may congratulate ourselves that the sewer is at the proper depth to afford good drainage through Soden Street, to a considerable section of low land lying southwesterly from Green and Franklin Streets. In this connection, I would renew the suggestions made in my last annual report, with reference to the construction of a sewer in Harvard Street, one in North Cambridge, and one for the large section lying north of Cambridge Street, and east from North Avenue. This last-named section has been more directly called to the attention of the City Government, through the several petitions presented, and hearings had upon the same during the season, — by my report made on the 12th of July last, — and the report of the Committee on Reservoirs and Drains of recent date, upon the examinations made as to the character of the soil of the route suggested for the location of the proposed main. Even at greatly increased expense over the estimates which have been submitted, I can but deem the construction of this sewer, considered in all its bearings, of vast importance to the City of Cambridge, and urge its consideration by the City Government early in the coming year. Exclusive of the amount necessary for building this sewer, I would recommend as requisite to meet the requirements of the coming year for sewers and drains, the sum of $40,000.

Streets.

But one street has been laid out and accepted as a public street the present season. This is owing in part to the present system adopted by the City Government for procuring plans preliminary to the accepting of any street, and the unsatisfactory condition in which they are presented. No plan offered for acceptance has been submitted to this office for examination or verification since the creation of the department, and it is from unofficial sources that the knowledge of their real character and value are known. Plans alluded to do not possess the necessary distances, angles, etc., nor a profile deemed essential to form a perfect record. They are not full and complete in detail, neither are there indications of monuments erected, or any other means to redetermine the original intent or real location, and consequently are of small value to the City, prepared solely to insure the acceptance of the street. If the present method of making streets could be changed, much expense and annoyance would be avoided by the City Government and by individuals. At present individuals consult only their private interest in the location of streets upon their premises, and grade them as cheaply as possible upon the surface. In time they are improved on either side, with buildings for dwellings or business, and the City authorities are called upon to accept such streets, to establish grades, and to correct defects. It is then that the faults appear, and the fact is revealed that insufficient attention has been given to the subjects of grade and drainage. I suggest that, on application for acceptance, the City should make the necessary examinations to determine the condition of the proposed street as to lines and grade, when, at once, the proper conditions to be imposed by the City would appear, the abuttors being required to pay the expense of the necessary surveys and plans. A common error in some sections of the City arises from placing all buildings at too low a grade upon streets subject to the action of tide waters. It is to be regretted that generally the most desirable grades are not established before they are occupied for building purposes.

The importance of guarding properly the limits of public streets from encroachments was alluded to in my last annual report, and again in a communication made to the City Government on the

15th of August last. I consider it to be for the interest of the City that the subject receive further consideration and active enforcement.

On the 24th of November an ordinance was passed as follows : — "Whoever shall intend to erect a building, fence, or wall, the whole or part of which is to be placed upon or within ten feet of any one of the streets, lanes, or squares, or alleys of the City, shall first apply to the City Engineer for information as to the lines and grade of said street, lane, square, or alley ; and it shall be the duty of the City Engineer to furnish the necessary information to such applicant, if in his power to do so; but if not, he shall proceed without delay to ascertain and determine the correct line and grade of such street, lane, square, or alley, and place the same upon record in his office. In default of the application required by this ordinance, the City shall be discharged from all responsibility for damages of any kind whatsoever, resulting from such default."

This ordinance, it appears to me, is subject to a construction at variance with its probable intent, and, if designed to protect the integrity of public street limits, I would respectfully suggest that it be amended in such manner as to cover its intent more clearly. Under this ordinance, the duties of the City Engineer are likely to be greatly enhanced by frequent calls to perform services, of little interest or responsibility but to the person or persons requiring the same.

The pressure of work, requiring immediate service from the City Engineer the past season, has prevented the extension of a complete and comprehensive survey of the City. Relieved of those duties by the final completion of the same, personal and active attention will now be given to the further consummation of this object.

During the season, the very desirable widening of Main Street, between Ellery and Harvard, has been accomplished. The present width west of Trowbridge Street is sixty-two feet. There is a stone bound at the angle in the northerly line, east of Trowbridge Street, and others will be set, as soon as circumstances will permit, at the intersections of Trowbridge, Remington, Quincy, and Harvard Streets. The importance of preserving correct lines by permanent monuments of this nature, suggests that, in all cases of

widening old streets, or laying out or accepting new ones, orders should be passed making it incumbent on the City Engineer to place bounds at all angles and intersections of streets.

Bridges.

It has not been made my duty to examine or report upon the condition of any of the bridges which the City has to maintain. This subject is not, however, directly assigned to any other department, and, having been considered in my last annual report so far as concerns the West Boston Bridge Draw, I take this occasion to renew the opinions therein expressed, and earnestly recommend the building of a new structure at as early a day as the public interests will permit. At the beginning of the year, considerable time was occupied with preparing various plans, specifications, and estimates for the consideration of the Committee on Roads and Bridges, or the City Council, but no design for thorough and permanent improvement was adopted. It is hoped that the coming year, some alterations may be agreed upon.

Cemeteries.

Calls upon the City Engineer the past season for services upon the Cemetery Grounds have been infrequent. But few lots, in addition to the large number previously prepared, have been required to be staked out and graded. The place presents unusual progress in its embellishment, manifestly indicating a desire to make it attractive and pleasing to the visitor, as well as those whose duty calls them here. A large and sufficiently diversified number of lots yet remain undisposed of. But little has been done towards grading the avenues and paths upon the more recent purchase and addition. When they are completed, it will afford, as a place for burial, a range in the selection of lots, unequaled in this vicinity. Surveys have been made for still an additional purchase, which it is hoped the Cemetery Commissioners may deem it important to recommend, and the City authorities wise to secure, for future requirements. The pond upon the grounds no longer appears unsightly, but has been improved and deepened, the island graded and made accessible as a promenade, and the banks and borders of the walks sodded. A new and substantial lodge has been erected, affording convenience and comfort to all, while improvements in

the condition of Coolidge Avenue, leading to the Cemetery, are now pending, which will immediately affect the attractiveness of the grounds.

It is desirable and but reasonable to expect that measures will also be taken by the City, at an early day, to lay out and build the proposed new way, leading from Mount Auburn Street to the northeast corner of the Cemetery. The expense attending such action seems but trifling, where the advantages are considered, as presented by a much shorter route for, probably, nine tenths of those who visit the premises.

The old Burying Ground in Ward I., which so long bore an appearance of utter neglect, has, during the season, under the supervision of the Chairman of the Committee on Public Property, been clothed in a different garb. Dilapidated monuments, tombs, and headstones, have been partially restored and righted, old rubbish removed, fences rebuilt and repaired, walks graveled, and the ground in general placed in a desirable and acceptable condition.

Public Park.

Plans have been furnished for the improvements ordered to be made upon the Park in Ward II., and, under direction of the Committee on Public Property, the place has progressed toward completion since the commencement of operations, which have, now, necessarily terminated from the severity of the season. The grounds have been laid out and graded, the old fence removed, contracts have been made for the requisite amount of stone work, and for the new iron and wood fences. The work will be resumed and finished as soon as the weather will permit.

Public Lands and Buildings.

The work of making complete surveys and plans of all the public lands and building lots has been commenced under an order of the City Council, directing the same, and will be completed in the manner indicated by said order, at as early a day as possible, consistent with other duties required of the City Engineer and his assistants.

Water Works.

A large portion of the time of the City Engineer has been required in connection with the extension and improvement of the

Water Works, so far as relates to the engine-house and completion of the reservoirs. Since the latter part of August, personal and constant attention and supervision has been given at the reservoir until its completion on the last of November. The ordinance, upon which this report is based, makes it the duty of the City Engineer to treat upon "the condition of all structures that come under his supervision that are in process of construction, or that have been completed, during the previous year, and such other general information, in relation to the same, as he may deem expedient." Not in disregard of such instructions, yet in order that my report may not assume unacceptable length, this subject will be treated in general terms only, leaving a history of their construction to appear in the report of the Water Commissioners for the current year. This matter is exclusively committed to the care of said Commissioners by ordinance relating to the "care and management of Water Works," and their report, together with the plans on file, and the following brief allusion, will afford sufficient information for general reference. But experience upon similar works in the past has demonstrated the necessity of careful descriptions, since it has been found difficult to obtain proper information, without great trouble and expense, after those engaged upon the construction have departed. While the details of the undertaking are familiar to those engaged therein, it is proper that a full and complete record should be made for the information of the City Government and subsequent boards of control. I would therefore respectfully suggest to said Water Commissioners — inasmuch, as to constitute the full completion of the Works, the new engines are yet to be accepted — that a subsequent report should be accompanied with illustrated descriptions of the pumping works, the reservoirs, and stand-pipe, as a contribution, which may contain valuable information for others in the construction of works of a similar nature. This commendable example is pursued by all other large cities, and upon all important works.

Early in the season, during the progress of the work at the pond, in securing suitable foundations for the screen-room, pump-well, and engine-house buildings, difficulties of a perplexing nature were encountered from quicksands, which underlie the marl and clay bed of the pond. By the application of proper efforts and perseverance, these obstacles were overcome, and brick structures have

been erected of the most durable and substantial nature, which, I trust, will long remain to bear testimony to the fidelity of execution. The retaining wall at the Reservoir has been constructed in accordance with a plan, adopted by the Commissioners previous to the connection of the City Engineer with the work this season, except in some slight particulars, where alterations were directed by the committee in charge as deemed advantageous for safety, and which, from subsequent results, have proved judicious and wise. The Reservoir has been constructed with much care for safety and durability, and performs properly its allotted part in the system of the works. The grounds have been laid out with due regard for taste, and, as completed, are already rendered attractive as a place of resort. The Stand-pipe was completed on the first of July, and on the eleventh its working capacity was tested, which proved more satisfactory than the most sanguine expectations. From the 22d of July until the 24th of November, it was used uninterruptedly for direct consumption to the city, with less complaint from the water-takers, and giving greater satisfaction upon elevated localities than ever before realized. To the sub-committee having in charge the execution of the various works the past season, I would express my thanks for their hearty coöperation in carrying out plans, by which the successful completion of every part of the work has been promoted ; and to the chairman of said committee, Hon. A. K. P. Welch, I most cheerfully accord thanks for the valuable suggestions and assistance he has so often, and always so willingly, rendered. I beg leave to congratulate the citizens of Cambridge upon the completion of a system of Water Works, that, in the durability and character of their construction, and in the mode of their operations, are believed to be second to none in the country hitherto constructed.

Office.

Since the last annual report, provision has been made for more ample and convenient accommodations for this department, with a large and commodious safe, for the preservation of the more valuable plans and records of the office. These apartments will be occupied on the first of January of the coming year. When in order, it is hoped they will present conveniences for imparting information to the various committees of the City Government, and others desiring the same, which will be acceptable to all. In addi-

tion to field work, 131 plans have been prepared in this office, required and necessary to the proper transaction of business for the various classes of work during the year.

For the Water Works	58
For Sewers, Streets, West Boston Bridge, Cemetery, and miscellaneous	73

In all cases duplicates have been retained of the same.

Expenses.

During the year there have been employed constantly an assistant and one man, and a portion of the season, two men, for the performance of the work required.

Salary of City Engineer, as paid upon bills rendered	$1,859.17
Paid assistant	1,000.00
Paid other help, car fares, stationery, drawing paper and materials, repairing instrument, office rent, and supplies for office	705.43
	$3,564.60

Respectfully submitted,

J. G. CHASE,
City Engineer.

REPORT

OF THE

TRUSTEES OF THE DANA LIBRARY.

The Trustees of the Dana Library herewith submit to the City Council their Eleventh Annual Report.

In doing so they must necessarily depend largely upon the Report of the faithful Librarian for the details of the year and present condition of the Library.

During the year ending November 30, 1868, there have been added to the Library two hundred and sixty volumes, of which fifteen were from Mr. William V. Spencer, one from Dr. Wyman, five from Hon. Henry Wilson, twelve from Miss Jacobs, one from Dr. Wellington, one from S. W. Brooks, two from Mr. J. B. Wiggin, and two hundred and twenty-three have been purchased by the City.

The whole number of volumes in the Library at the present time, exclusive of pamphlets, is three thousand eight hundred and forty-two.

Nine thousand three hundred and eighty-nine books have been given out the past year, making an average of one hundred and ninety-six per week. The largest in one day being one hundred and fifty-two, and in a week two hundred and ninety. No books have been lost the past year, and but five are missing, and the Library is now in good condition, and appears to be doing a useful work for our community.

A commodious new book-case has been added the past year, and is fast being filled. The books have been well treated, and but little defacement has occurred, and our young people continue very largely to avail themselves of the privileges which the Library affords.

The great want most needed at this time is an appendix to the

Catalogue, which now fails to represent over one thousand volumes, and which defect is supplied at present by written lists at much inconvenience. This should be published in a convenient form immediately.

From the schedule of expenditures submitted below, it will be seen that an increased appropriation will be required the coming year. To keep pace with our increase of population, an appropriation ought to be made for the purchase of more books yearly. It would also be more gratifying to be able to report a much larger annual increase of books from the citizens, especially when we consider the immense number of selected books, of our own authors, published within our City limits every year. We are making slow progress for our City Library to meet the wants of the most literary city in our State. A public library well endowed is one of the best investments for a city, and the many benefits to be derived therefrom apply as well to cities as to individuals, and it is highly desirable that some measures be adopted to increase the number and vareity of our collection in this Library for several years to come, and to make it a source of pride to our City, as well as add to the efficiency of this public educational institution.

Amount received from subscriptions during the year .	$267.00
Amount received from fines during the year . .	14.10
Amount received from the sale of Catalogues during the year	8.10
Making a total of	$289.20

All of which has been paid into the City Treasury.

Amount of City Appropriation, including amount furnished under the Dana gift, was . . .	$1,357.76

Expenditures.

Librarian's salary . . .	$250.00
Assistant's salary	32.00
Books and stationery . . .	373.90
Binding books	19.40
New book-case	89.20
Amount carried forward,	$764.50

Amount brought forward,		$764 50
Care of room and cleaning		125.00
Rent of room (eighteen months)		375.00
Gas		26.04
Fuel		10.72
Insurance		20.00
Painting		9.50
Newspapers		2.20
Alcohol		80
Water-rates		24.00
		$1,357.76

All of which is respectfully submitted.

CHAS. H. SAUNDERS,
W. W. WELLINGTON,
WILLIAM PAGE,
CHARLES DEANE,
HENRY W. MUZZEY,
ANSON HOOKER,
ALVARO BLODGETT.
} *Trustees of the Dana Library.*

CAMBRIDGE, *December* 18, 1868.

REPORT

OF THE

TRUSTEES OF THE DOWSE INSTITUTE.

To the Honorable City Council of Cambridge: —

The Board of Trustees of the Dowse Institute would respectfully report: —

Lectures were given during the last season by the following persons: —

Theodore Tilton,	A. A. Willits,
Andrew P. Peabody,	George W. Green,
George H. Hepworth,	Edwin P. Whipple,
Jacob M. Manning,	Edward E. Hale.

Readings were given by George Vandenhoff, Lewis B. Munroe, and Henry Nicholls.

There were two Concerts: one by the Mendelssohn Quintette Club, and one by a Quartette of musical performers from Boston and Cambridge.

The accompanying copy of the Annual Report of the Treasurer contains a statement of receipts and expenditures. The following is an abstract of said report: —

Dr.

To paid for lectures, concerts, and readings	$975.00
Printing and advertising	35.75
Care of hall, doorkeepers, etc.	78.00
Stationery, stamps, etc.	5.00
Repairing camp-stools	3.50
Apparatus for High School	50.00
To balance to new account	131.26
	$1,278.51

Cr.

By balance from last account	$138.51
By interest, City of Cambridge	600.00
By sale of tickets	540.00
	$1,278.00

Respectfully submitted,

CHARLES DEANE,
HENRY W. MUZZEY,
JOHN C. DODGE,
W. W. WELLINGTON,
CHAS. H. SAUNDERS.
} *Board of Trustees.*

CAMBRIDGE, *December* 22, 1868.

REPORT

OF THE

TRUSTEES OF THE SANDERS TEMPERANCE FUND.

The Trustees of the Sanders Temperance Fund, agreeably to an Ordinance of the City, herewith respectfully submit their Fourth Annual Report, for the financial year ending November 30, 1868: —

The Trustees, at their quarterly meeting in April last, reëlected Rev. William R. Stone as Missionary for the year to carry out the wishes of the donor, in "reforming old drunkards, preventing young drunkards, and abolishing as far as possible the use of all intoxicating articles," and we believe his efforts have been faithfully directed to these objects, and that his influence has been beneficial to the many unfortunates ministered to among us.

The Fund amounts to the sum of ten thousand dollars, and remains invested in the notes of the City, bearing six per cent. interest, payable quarterly, the income of which has been paid to the Missionary. An available fund for the purpose of rendering assistance and encouragement to this class of persons seems indispensable to make this charity successful.

The objects above will ever present a wide field for operations. More than one half of all the arrests made in the City for the past year were for the crime of drunkenness, and it is earnestly hoped that the hearts of the philanthropic will so enlarge the present resources of this charity that greater results in the future will accrue to our community. For the use of the City Council, the Trustees take pleasure in appending to their brief report the report of the Missionary.

CHAS. H. SAUNDERS,
SAM'L. B. RINDGE,
HENRY W. MUZZEY,
L. S. LEARNED,
H. O. HOUGHTON.

Trustees of the Sanders Fund.

Cambridge, *December* 17, 1868.

REPORT

OF

REV. WILLIAM R. STONE.

"SANDERS TEMPERANCE FUND" MISSIONARY.

To his Honor the Mayor and the Honorable Board of Trustees of the "Sanders Temperance Fund": —

THE undersigned would respectfully submit this, his Annual Report.

In reviewing the labors of the past year, your Missionary sees much reason to return thanks to Almighty God for his preserving care, and for the success which He has been pleased to give to our labors in the cause of temperance. We thank Him that He has put it into the hearts of men to remember the fallen and the miserable, to seek to recover them to virtue and to happiness. Among those who will ever be ranked among the benefactors of mankind, the name of Charles Sanders will be conspicuous, and many will have reason to be thankful for the institution of the "Sanders Temperance Fund."

Our labors during the year have been of the same kind as in the year preceding. It has been our constant work to seek out the inebriate, and wherever we could find him to endeavor to induce him to make an effort to break the chains which the habit of drinking had fastened upon him, and to return to sober life. In seeking out the subjects for our labors, we have visited the lock-up, the court-room, and the prison, as well as the abodes which have been made wretched by the use of strong drink. Our success has been perhaps as much as might have been expected, though not all we have desired.

I have on my list the names of three hundred and seventy-three persons of adult age, whom I have spoken to, and have labored with to induce them to reform. This is no easy task for them to

perform, and could not be accomplished by any but by the help of God. Yet we are thankful to be able to say that His help is never withheld from those who have sought it; and we know men and women to-day in our city who can say that when they resolved to reform, strength was given them to persevere, and they *have* persevered. If all had done so whom we hoped would, we might soon have expected to see the dawn of the Temperance Millennium, nor should we have had to wait long for the reign of peace on earth and good-will to men. But with a strong appetite within and many opposing influences without, it is not strange that some who for a time run well, afterwards yield to temptation, and again fall away. But we do not give up the fallen, but still follow him with efforts to win him back to sobriety; and though disappointed again and again, yet we act upon the principle, that while there is life there is hope, and still hope on and labor on. Though we do not see all the fruit we desire from the seed sown, yet we sometimes have our eyes gladdened, and our hearts cheered, by the happy sight of a husband and father restored to his family, or a son to his parents. We know too that good is derived from our efforts in the temperance cause, by those who do not fully and forever abstain and reform. If we can keep a man sober one year, or even part of a year, it is so much gained, and who can estimate the value of six months of sober life against the same time spent in drunkenness?

In our labors we have included the young as well as the old, and where we had opportunity have addressed Sabbath-school and other children, thus seeking to sow the good seed of Temperance before any deep-rooted habits of sin had preoccupied the ground. I may not in this report be called upon to review existing laws, or to suggest amendments. I leave that for wiser heads and stronger hands. I thank God that in our City as well as in our State our laws are wisely administered and faithfully executed. Notwithstanding intemperance is not wholly driven from among us, yet under the watchful care of our vigilant police, we dwell securely and quietly, and if virtuous, happily.

I am, gentlemen, very respectfully yours,

WILLIAM R. STONE.

CAMBRIDGE, *December* 17, 1868.

REPORT

OF

ENOCH J. HOWLETT,

MILK INSPECTOR.

To his Honor the Mayor and Aldermen of the City of Cambridge:—

GENTLEMEN, — The undersigned respectfully submits the following Report from February 12 to December 1, 1868: —

The milk trade of the City is divided into three classes, 1st, Those dealers who sell from wagons, carriages, etc. 2d, Those dealers who sell from their shops, stores, and cellars. 3d, Those who keep cows and sell to the families in their neighborhood.

There have been recorded the names and residence of dealers, selling from carriages, wagons, etc. . . .	23
There have been recorded the names of dealers who sell from their stores, shops, cellars, etc.	126
There have been recorded the names and residences of persons keeping cows within the City limits . . .	27
Number of samples of milk inspected	205
Number of gallons of milk sold daily to families . .	1,527

All places in the City where milk is publicly sold have been visited, and the milk inspected. A large proportion of our milkmen supply private families exclusively, and your Inspector is of the opinion that it is not his duty to intrude his services unsolicited on any private family in regard to the quality of their milk. Three samples of milk have been inspected for private families at their request, and in each of those cases the milk was found good and free from adulteration.

Previous to the appointment of your inspector, there had not been kept, as required by the law, a record book for the registering

of the names and residences of those who were dealers in milk in the City. A suitable record book has been procured, and notices have been published in the local papers, calling the attention of the citizens to the requirements of the law, and the duties to be observed by the milkmen and other dealers.

The standard of the milk sold from the stores in the City is 17° specific gravity, being 3° below the standard of the Orange County milk. In parts of the City where the poorer classes reside, your inspector has found milk that has not only been adulterated, but also subjected to the skimming process, and in some cases where the adulteration has been fully twenty-five per cent. added water, but more frequently where the skimming process was used alone.

Through the politeness of Mr. Henry Faxon, Milk Inspector of Boston, your inspector has had the privilege of examining the records of over two hundred cases that the City of Boston has had analyzed within a few years, and he finds that the adulteration of milk consists generally in the addition of water alone, although not unfrequently a little burnt sugar is added to restore the color, and common salt to bring up the specific gravity to the normal standard.

Respectfully submitted,

E. J. HOWLETT,
Milk Inspector.

REPORT

OF THE

CAMBRIDGE WATER BOARD.

In obedience to the requirements of an ordinance of the City, the Cambridge Water Board have the honor to lay before the City Council their fourth

ANNUAL REPORT,

Presenting a statement of the progress of the works during the past year, their present condition, with a statement of the receipts and expenditures, which gives strong assurance that, notwithstanding the great outlay at the Engine-house and at the Reservoir during the year, the increase of water-rates from additional water taken will be sufficient to meet the increased expenses and interest for the coming year.

The net cost of the Works, December 1, 1867, was	$532,273.64
Expended for construction the past year . .	160,496.38
Interest on water debt	37,014.00
Total	$729,784.02
Deduct excess of income over expense . .	55,535.35
Net cost of the Works, December 1, 1868 .	$674,248.67
Receipts from water-rates for the year ending December 1, 1868	$63,747.42
Receipts from water-rates for the year ending December 1, 1867	52,733.62
Increase of water-rates	$11,013.80

Receipts from all sources for the year ending December 1, 1868	$79,434.56
Receipts from all sources for the year ending December 1, 1867	66,040.66
Increase of receipts in 1868 . . .	$13,393.90

For a more detailed statement of the financial account of the Water Works, reference may be had to the Report of the Water Registrar, hereunto annexed.

The sinking fund established for the redemption of the Water Debt amounted on the first day of December, 1868, to $24,463.38. In extending the work the present year we have laid of

36-inch pipe	312 feet.
24-inch pipe	45 feet.
20-inch pipe	135 feet.
16-inch pipe	125 feet.
12-inch pipe	4,716 feet.
6-inch pipe	9,572 feet.
4-inch pipe	16,186 feet.
3-inch pipe	2,324 feet.

Total amount of pipe laid, 33,415 feet, or more than six miles, making the whole length of pipe now laid about forty-three miles.

The Board have continued the practice of placing meters upon all large supplies, and the result has been highly favorable to the City. Fifteen new meters have been set the present year, increasing the number now in use to twenty-seven. Twenty new fire hydrants have been set, and the pipe in River Street has been lowered for about 1800 feet. 507 supply pipes have been put in, giving an increase of water-rates of $11,013.80, a sum more than sufficient to pay the interest on the entire expenditures of the year.

For a more definite statement of the location of the pipe, and for a full description of all branches of the work of the present year, we would refer you to the accompanying Report of the Superintendent, hereunto annexed.

During the past year important improvements, and very great enlargement of the Works, have been made. The old reservoir, which was in a very bad condition and thought to be unsafe, has

been rebuilt substantially. A retaining wall has been extended entirely around it, uniform with that around the new one. To do this the reservoir was made much wider and higher, and therefore of much greater capacity. The reservoirs have been finished according to the plan adopted by the Board, drawn by the City Engineer.

An overflow pipe has been placed in the partition wall of 20 inches in diameter, opening into a chamber from which a 12-inch pipe is laid to each of the reservoirs below low-water level, so that they will not be liable to freeze up during the cold weather.

This overflow pipe within the chamber above referred to has, below the partition wall, an opening for each reservoir which can be used so that there will be no danger of overflowing one reservoir while the other is being cleaned. The overflow chamber is partitioned so that the water from one reservoir will not pass into the other.

The top of the overflow pipe is placed far enough below the top of the coping of the reservoirs to carry away any surplus water that will probably be pumped, and prevent the overflowing of the reservoirs at any time, and the washing of the banks.

The coping to the new reservoir has been relaid on a bedding of concrete, it having settled out of level by reason of the banks yielding, as all new earthwork is liable to do.

With the old reservoir completed, the whole presents one of the finest pieces of engineering and mason-work to be found in the country.

The stand-pipe, about which there have been so many grave doubts, has been finished, and the City has been supplied for many months entirely through it. It was found necessary, in order to relay the coping to the new reservoir and complete the old, that the supply should be furnished independent of the reservoirs, and the committee charged with the duty of completing the Works found it necessary to complete the stand-pipe. The result proved highly satisfactory to the Board. For more than four months the City has been supplied through the stand-pipe, furnishing water plentifully to the highest houses, while the head has been raised from 17 to 25 feet above the former head in the reservoirs, proving conclusively the utility of the stand-pipe to meet the wants of the water-takers.

The stand-pipe is also a perfect regulator of the quantity of water pumped. The head of water in the stand-pipe being uniform, the pumps run with a uniform speed; but an increased head produces an increased resistance on the pumps, causing them to run slower, and therefore less water is pumped, while a greater consumption reduces the head, and therefore the resistance, and a greater quantity of water is pumped.

The reservoirs completed are worthy of the City, and with the graveled walk around them, and the beautiful sodded banks and stone steps for their approach, may well challenge an equal in the whole country. Should the water in the stand-pipe freeze to any considerable thickness, the pumps would have no relief, but would be pumping into the street mains; therefore it was deemed expedient that the stand-pipe should be protected. Accordingly, a house, or tower, has been erected over it in the form of a column, much higher than the stand-pipe, in order to present a symmetrical appearance, and at the same time provide for increasing the height of the stand-pipe, should it ever be desired.

The first ten feet of the casing have been made of brick, surmounted with a granite moulding that matches the foundation. The rest of the house is constructed of wood, with a circular staircase within and around the stand-pipe to the look-out upon the top.

The casing to the stand-pipe will do the double duty of protecting the water from frost, and of affording our citizens, and strangers who may visit us, the best view of the surrounding country to be had in the vicinity.

No doubt the supply of the City will be furnished through the stand-pipe generally, but there will always be some contingencies to be provided for, such as the breaking or repairing of pumps and boilers; therefore it is of the utmost importance to have reservoirs of sufficient capacity to supply the City for several days, while repairs are making.

As now arranged, a check valve placed in the pipe leading from the reservoirs closes when the water rises in the stand-pipe, and allows the City to be supplied with a greater head of water. But when the pumps stop, or fail to furnish the increased head, the valve opens, and the water runs from the reservoir, thereby furnishing a constant supply, but at a lower head. As a reservoir this is its true office, and it should be kept merely as a *reserve.*

The City Engineer, Mr. Josiah G. Chase, has the past season been of much service on the works. He has at all times shown himself able and obliging. The committee in charge of the Works placed the completion of the reservoir work in the hands of Mr. Chase, who acted as superintendent as well as engineer of that particular work, under their direction. He prosecuted the work with much zeal, and barely completed the earthwork before the freezing of the ground.

The retaining wall built around the reservoir has settled a little in two places, but appears to have reached a firm bearing. It has shown no signs of settling for some weeks, and no fears are entertained by the Board in regard to it, as it is amply strong for the purpose intended. Some little finishing up upon the reservoirs will be required in the spring; when done, there will be no further expenditure needed upon them, we trust, for many years.

At the pond there have been erected a coal-shed, an engine, and a boiler-house, for the engine contracted for last year with Mr. H. R. Worthington, and the grounds have been inclosed with a substantial picket fence.

It was found necessary, in order to put in the foundations to the new engine and boiler-houses, first to make a coffer-dam around the whole work, which was done with as little expense as possible, with three-inch sheet-piling. In order to pump out the water within the dam it was thought best to purchase a small steam-engine and a rotary pump. This proved to be a wise conclusion, as the removing of water was much more of a problem than at first considered.

In the excavation for the foundations for a well-room and the engine, we struck quicksand, which at one time seemed to baffle all efforts to confine it; but with great quantities of hydraulic concrete, and indomitable perseverance, solid foundations were finally obtained, which we trust will last as long as they may be required.

The house for the new engine is much higher than the one for the small engines; it was built from plans furnished by Mr. Worthington, and presents a fine appearance from any point of view. The screen-rooms, which heretofore were exposed to freezing and impurities, have been inclosed in substantial brick houses, protecting them as well as rendering them easy of access at all times, and furnishing room for a repair shop.

The new engine built under contract with Mr. H. R. Worthington, of New York City, for the sum of $40,000, has been put in place, the boilers set, and the machine put in motion, but it is not accepted by the Board at the present time. Its capacity is 5,000,000 gallons in twenty-four hours, and the Board have no doubt it will prove entirely satisfactory.

Although the contract specified that it should be delivered in June last, we were not ready to receive it much before it was delivered. The foul weather in the early part of the season, and the many difficulties encountered in putting in the foundation, delayed the completion of the engine-house for its reception much beyond the time specified.

The consumption of water by the City at the present time is about two million gallons per day of twenty-four hours, about the entire capacity of both the old pumps run all the time, — an increase during the year of 700,000 gallons ; and we can congratulate the City, in view of this increasing consumption, that the new engine of more than double their capacity is now nearly ready for use. For it is apparent to all who have carefully considered the increasing consumption, that the old engines would be unable to supply the City during the winter months, when more water is consumed than during the summer.

The rapid increase of water-takers, and consequent consumption of water, admonish us that early measures should be taken to secure the water of Spy Pond, as provided for in the charter establishing the Cambridge Water Works.

Should the water of that pond be held for the use of the City, we may have little fears for a supply for many years to come. What is the capacity of Fresh Pond ? some may well ask. In reply, we can only say that we have been unable to produce any perceptible reduction with the greatest draft of water made with our pumps.

Combining all the pumping power, we shall be able to deliver about 7,500,000 gallons daily, provided there should be no breaking down of any of the machinery ; but it will be readily seen that we must have in reserve almost the same pumping power as we use, to be entirely safe from accident.

It is believed that the Works, as now constructed, are just what the City needs, and that the cost of the same, according to

their capacity, is below the cost of those of any other city in the Union.

Very little will have to be expended for many years upon the works, other than extending the street mains as the citizens may desire; and it appears to the Board that they are now placed upon a secure foundation and will bring to the City greater returns upon the investment than heretofore.

All which is respectfully submitted.

JOHN SARGENT,
CHARLES H. SAUNDERS,
ROBERT DOUGLASS,
C. W. KINGSLEY,
A. K. P. WELCH,
SAMUEL SLOCOMB,
HENRY W. MUZZEY.

Cambridge Water Board.

REPORT

OF

THE WATER REGISTRAR.

WATER REGISTRAR'S OFFICE,
CAMBRIDGE, *December* 1, 1868.

To the Cambridge Water Board: —

GENTLEMEN, — In compliance with the provisions of the ordinance for the care and management of the Cambridge Water Works, the undersigned respectfully presents his Annual Report for the year ending November 30, 1868.

Receipts.

The total amount of water-rates received for the year ending November 30, 1868, was	$63,747.42
Cash received on supply account for pipe, laying, repairing, etc.	13,315.43
Cash received for sheet iron sold	1,846.45
Cash received from Engineer for rent of house	225.00
Cash received for pasturage on land in Somerville	12.00
Cash received for old iron, coal, etc., sold	243.26
Cash received for horse and wagon sold	45.00
Total cash receipts from all sources	$79,434.56

All of which has been paid into the City Treasury.

Expenditures.

The expenditures for the care and management of the Works for the year ending November 30, 1868, have been as follows: —

For care and repairs	$7,655.83
For pumping service	6,204.73
For office expenses	2,648.29
Total amount	$16,508.85

The expenditure on the extension of the Works for the year ending November 30, 1868, was .	$160,496.38
The expenditure on supply account for the year ending November 30, 1868, was	$13,461.91
Received for water-rates for the year ending November 30, 1868	$63,747.42
Expended for the care and management of the Works	16,508.85
Balance in favor of the Works . . .	$47,238.57

Supply Account.

Cash received on above account .	$13,315.43	
Now due	5,314.55	
		$18,629.98
There was reported as due December 1, 1867	$2,458.58	
Since expended	13,461.91	
		15,920.49
Balance in favor of account . . .		$2,709.49

During the year the water has been turned off for non-payment of rates twenty-three times. Of this number, twenty have been let on, leaving a balance of three still remaining off.

Five hundred and seven supply pipes have been laid since December 1, 1867, supplying —

663 Families.
21 Stables.
5 Manufactories.
15 Stores and Offices.
12 Hand Hose.
3 Churches.
3 School-houses.
3 Saloons.
2 Carriage Manufactories.
1 Garden.
1 Soap Manufactory.
1 Lead Pipe Manufactory.
1 Boarding-house.

1 Fire Engine House.
1 Rolling Mill.
1 Skating Rink.

Increasing the rates, when all in use, about . $3,500.00

STATEMENT

SHOWING THE NUMBER OF FAMILIES, STORES, MANUFACTORIES, ETC., SUPPLIED WITH FRESH-POND WATER TO DECEMBER 1, 1868.

4,102 Families.
285 Stables.
198 Hand Hose.
140 Fire Hydrants.
118 Stores and Offices.
66 Stationary Engines.
32 Boarding-houses.
17 School-houses.
16 Meat Markets.
14 Soap Factories.
12 Bakeries.
14 Saloons and Victualing Houses.
14 Barber Shops.
10 Machine Shops.
10 Blacksmith Shops.
9 Furniture Manufactories.
8 Green-houses.
8 Churches.
6 Book-binderies.
6 Livery Stables.
6 Billiard Halls.
5 Printing Offices.
5 Fish Markets.
5 Planing Mills.
5 Iron Foundries.
5 Public Halls.
5 Fire Engine Houses.
5 Banks.
4 Glass Manufactories.

4 Photograph Rooms.
4 Horse-railroad Stables.
3 Public Houses.
3 Slaughter Houses.
3 Stone Yards.
3 Post-offices.
3 Police Stations.
3 Carriage Manufactories.
3 Fountains.
3 Oil Factories.
3 Laboratories.
2 Club Stables.
2 Club Rooms.
2 Cattle Yards.
2 Cow Pastures.
2 Paint Shops.
2 Brush Manufactories.
2 Cooper Shops.
2 Tin Ware Manufactories.
2 Tallow Manufactories.
2 Bacon Works.
2 Cigar Manufactories.
2 Currier Shops.
2 Stereotype Foundries.
2 Chemical Works.
2 Boiler Manufactories.
1 Rolling Mill.
1 Tube Works.
1 Bleachery.
1 Coffin Manufactory.
1 House of Correction.
1 Lard Works.
1 Steam Railroad.
1 Nursery.
1 Distillery.
1 Brewery.
1 Laundry.
1 University.
1 City Hall.

1 Gymnasium.
1 Gas Works.
1 Steam Tug.
1 Lead Pipe Manufactory.
1 Church Organ Manufactory.
1 Piano Forte Manufactory.
1 Marble Works.
1 Car Manufactory.
1 Reversible Paper Collar Co.
1 Skating Rink.
1 Tobacco Soap Manufactory.
1 Sausage Manufactory.

During the year fifteen meters have been applied to the premises of water-takers, and in almost every case the rates have largely increased. The more general use of meters in manufacturing establishments would be undoubtedly of great advantage to the City in increasing the income and checking the waste.

STATEMENT

SHOWING THE NUMBER AND SIZES OF METERS IN USE, DECEMBER 1, 1868.

	Size of Meters.					
	$\frac{5}{8}$ inch	$\frac{3}{4}$ inch.	1 inch.	$1\frac{1}{2}$ inch.	2 inch.	4 inch.
Middlesex Bleachery	–	–	–	–	–	1
North, Meriam, & Co.	–	–	–	–	1	–
Boston and Lowell Railroad Co.	–	–	1	–	3	–
Leon Goodall & Co.	–	–	–	–	1	–
J. P. Squire & Co.	–	–	–	–	1	–
Beal & Hooper	–	–	–	–	1	–
New England Glass Co.	–	–	–	–	1	–
American Tube Works	–	–	–	–	1	–
Billings & Bullock	–	–	1	–	–	–
Welch, Bigelow, & Co.	–	1	–	–	–	–
Commons Hall	1	–	–	–	–	–
Shawmut Iron Works	1	–	–	–	–	–
Bowman, Grant, & Co.	–	–	1	–	–	–
H. O. Houghton & Co.	–	–	–	–	1	–
Cambridge Laundry	–	–	1	–	–	–
Tobacco Soap Manufacturing Co.	–	–	1	–	–	–
Broadway Glass Works	–	–	–	1	–	–
John A. Ellis & Co.	–	–	–	1	–	–
House of Correction	–	–	–	–	1	–
Union Glass Works	–	–	2	–	–	–
Boston Chemical Works	–	–	–	–	1	–
C. L. Jones & Co.	–	–	1	–	–	–
Boston Rolling Mill	–	–	–	–	1	–

In the early part of the year the premises of each water-taker were visited, and the examinations made were beneficial to the City, as in many places during the winter months there is a great liability of waste from carelessness, or by the fixtures being out of order.

Respectfully submitted,

A. F. FIFIELD,
Registrar.

REPORT

OF THE

SUPERINTENDENT OF THE WATER WORKS.

To the Cambridge Water Board: —

GENTLEMEN, — In compliance with the ordinance providing for the care and management of the Cambridge Water Works, I herewith submit my Annual Report. The following is a statement of main and branch pipes laid, their size, length, and location, together with all gates, stop-cocks, waste-gates, and blow-off pipes set since my last Report in the following streets: —

STREETS.	SIZE.	LENGTH.
	Inches.	Feet.
Austin Street, Prospect to Essex Street	4	289
Austin Street, Prospect Street west to 3-inch pipe	4	325
Appian Way, Garden to Brattle Street	4	549
Allston Street, extended east of Pearl Street	4	90
Blackstone Street, extended north	4	429
Brooks Street, from Magazine Street	4	245
Bay Street, from Franklin Street	4	50
Columbia Street, extended south to Webster Avenue	3	338
Columbia Street, extended north at Conlan's	3	136
Columbia Street, Court at Conlan's	3	170
Charles River Street, from Mount Auburn Street	4	350
Copperthwaite Street, from De Wolf Street	4	369
Cogswell Avenue, extended	4	890
Cottage Street, Pleasant to Pearl Street	6	997
Charles Street, Court to Fifth Street	6	780
Court Street, Broadway to Main Street	6	128
Davis Street, Broadway to Hampshire Street	12	242
Dana Street, Harvard to Centre Street	6	333
Day Street, from North Avenue	4	576

STREETS.	SIZE.	LENGTH.
	Inches.	Feet.
De Wolf Street, extended to Copperthwaite Street	4	337
Ellery Street, Broadway to Harvard Street	6	678
Eighth Street, Otis to Thorndike Street	4	247
Elm Street, extended north of Hampshire Street	4	625
Ellsworth Avenue, extended to Cambridge Street	3	99
Fourth Street, Gore to Cambridge Street	4	212
Foster Street, Irving to Foster Court	4	45
Foster Court, south from Foster Street	3	387
Frost Street, from Forest Street	4	294
Follen Street, from Concord Avenue	4	657
Franklin Street, Pleasant to Putnam Street	6	2,205
Fifth Street, Charles to Cambridge Street	6	1,262
Garden Street, Bond to Shepard Street	6	635
Hamilton Street, Magazine to Pearl Street	6	450
Hamilton Street, east from Pearl Street	4	317
Hancock Street, north from Franklin Street	4	40
Hilliard Street, from Brattle Street	4	286
Hampshire Street, Davis to Portland Street	12	133
Inman Street, Harvard to Main Street	12	1,000
Inman Street, from Broadway	6	232
Irving Street, Brattle to Foster Street	4	549
Kinnaird Street, Western Avenue to 3-inch pipe	4	216
Lee Street, Harvard Street to 4-inch pipe	4	420
Lopez Street, Pearl to Brookline Street	4	513
Lake Street, Pearl to Magazine Street	6	490
Main Street, Inman to Pleasant Street	16	125
Mount Auburn, Holyoke to Dunster Street	4	218
Mount Vernon, from North Avenue	4	580
North Avenue, from Rice Street	6	513
Norton Street, from Avon Street	4	268
Otis Street, Seventh to Eighth Street	4	155
Otis Street, Court to Second Street	4	350
Pumping Main, to connect new Engine	24	45
Prince Street, Pleasant to Magazine Street	4	564
Putnam Street, extended south	4	270
Pleasant Street, Main to Walnut Street	12	3,000
Perry Street, from Pearl Street	4	225
Portland Street, from Hampshire Street	12	318
Rockwell Street, Pleasant to River Street	4	491
Reservoir, discharge pipe	20	75
Reservoir, overflow pipe	20	60
Reservoir, overflow to Stand-pipe into Reservoir	6	85

STREETS.	SIZE.	LENGTH.
	Inches.	Feet.
Reservoir, overflow to Stand-pipe	12	23
State Street, west from Village Street	3	207
Sydney Street, from Front Street	4	576
Shepard Street, from Garden Street to 4-inch pipe	6	784
Squire's Court, from Gore Street	3	387
Suffolk Street, Columbia to Norfolk Street	4	603
Soden Street, extended north	3	75
Soden Street, Franklin Street to 3-inch pipe	4	220
Spring Street, from Fifth Street to 3-inch pipe	4	272
Temple Street, from Austin Street to 3-inch pipe	4	125
Union Street, Market to Hampshire Street	4	396
Vine Street, 12 to 4-inch pipe, Court Street	4	50
Watson Street, from Pearl Street	4	360
Webster Place, from Pleasant Street	4	361
Webster Street, from Pleasant Street	4	50
Winsor Street, Harvard to School Street	4	819
Warren Street, from Gore Street	4	313
Worcester Street, Norfolk Street to 3-inch pipe	3	120
Washington Court, from Putnam Street	3	405
Well-room to pond, supply for Engine	36	312

The following gates, stop-cocks, and blow-off pipes have been set during the year: —

STREETS.	NUMBER.	SIZE.
		Inches.
Discharge pipe east side of Reservoir	1	24
Discharge pipe west side of Reservoir	1	20
Inman and Main Streets	1	12
Pleasant and Main Streets	1	12
Pleasant and Cottage Streets	1	12
Opposite Rolling Mill, Portland Street	1	12
Linnæan Street	1	10
Mason and Brattle Streets, old one removed	1	10
Main and Inman Streets	1	8
Main and Pleasant Streets	1	8
Garden and Bond Streets	1	6
Garden and Shepard Streets	1	6
Magazine and Hamilton Streets	1	6
Pleasant Street and Harrison Avenue	1	6
Pleasant and Cottage Streets	1	6

STREETS.	NUMBER.	SIZE.
		Inches.
Pleasant and Franklin Streets	2	6
Pleasant and Walnut Streets	1	6
Magazine and Lake Streets	1	6
Magazine and Cottage Streets	1	6
Pearl and Cottage Streets	1	6
Charles and Court Streets, 4-inch one removed	1	6
Charles and Fifth Streets	1	6
Cambridge and Fifth Streets	1	6
Hampshire and Davis Streets	1	6
Hampshire and Portland Streets	1	6
Broadway and Ellery Street, 4-inch one removed	1	6
Harvard and Ellery Streets	1	6
Harvard and Dana Streets	1	6
Broadway and Inman Street, 4-inch one removed	1	6
Waste at west side of Reservoir	1	6
Magazine and Auburn Streets	1	4
Milk Street, at Bleachery	1	4
North Avenue and Mellen Street	1	4
Magazine and Brooks Streets	1	4
Cambridge and Fourth Streets	1	4
Harvard and Winsor Streets	1	4
Main and Winsor Streets	1	4
Essex and Harvard Streets	1	4
Hampshire and Elm Streets	1	4
North Avenue and Day Street	1	4
Rockwell and Pleasant Streets	1	4
Rockwell and River Streets	1	4
Otis and Seventh Streets	1	4
Otis and Third Streets	1	4
Columbia and Harvard Streets	1	4
Lee and Harvard Streets	1	4
Hydrant Branch, Harvard and Main Streets	1	4
Hydrant Branch, Trowbridge and Main Streets	1	4
Brattle and Irving Streets	1	4
Appian Way and Garden Street	1	4
Lopez and Pearl Streets	1	4
Williams and Pearl Streets	1	4
Inman and Austin Streets	2	4
Main Street, hydrant branch opposite City Hall	1	4
Pleasant and Somerset Streets	2	4
Pleasant and Prince Streets	1	4
Pleasant and Short Streets	2	4

STREETS.	NUMBER.	SIZE.
		Inches.
Pleasant and Park Streets	1	4
Pleasant and Warland Streets	1	4
Pleasant and Webster Streets	1	4
Pleasant and Webster Court	1	4
Pleasant and Auburn Streets	2	4
Pleasant and Green Streets	2	4
Lake and Pearl Streets	1	4
Erie and Pearl Streets	1	4
Franklin and Pearl Streets	1	4
Franklin and Soden Streets	1	4
Franklin and Hancock Streets	1	4
Franklin and Bay Streets	1	4
Main Street, old one removed on bridge	1	4
Franklin Street, hydrant branch	1	4
Charles and Fourth Streets	1	4
Fifth and Vine Streets	2	4
Fifth and Spring Streets	2	4
Fifth and Thorndike Streets	2	4
Fifth and Otis Streets	2	4
Sixth and Thorndike Streets	1	4
Brattle and Hilliard Streets	1	4
River and Kinnaird Streets	1	4
River and Auburn Streets	1	4
North Avenue and Mount Vernon Street	1	4
Spring and Sixth Streets	1	3
Williams and River Streets	1	3
Washington and Winsor Streets	1	3
Squire's Court and Gore Street	1	3
Ellsworth Avenue and Cambridge Street	1	2
Appian Way and Brattle Street	1	2
Norton Street	1	$1\frac{1}{2}$
Perry Street	1	$1\frac{1}{2}$
Sydney Street	1	$1\frac{1}{2}$
North Avenue	1	$1\frac{1}{2}$
Webster Court	1	$1\frac{1}{2}$
Hamilton Street	1	$1\frac{1}{2}$
Squire's Court	2	$1\frac{1}{2}$
Frost Street	1	$1\frac{1}{2}$
State Street	1	$1\frac{1}{2}$
Union Street	1	$1\frac{1}{2}$
Mount Vernon Street	1	$1\frac{1}{2}$

RECAPITULATION.

312 feet	36-inch iron pipe.
45 feet	24-inch iron pipe.
135 feet	20-inch iron pipe.
125 feet	16-inch iron pipe.
4,716 feet	12-inch iron pipe.
9,572 feet	6-inch iron pipe.
16,186 feet	4-inch iron pipe.
2,324 feet	3-inch iron pipe.

Gates.

1	24-inch.
1	20-inch.
4	12-inch.
2	10-inch.
2	8-inch.
21	6-inch.
60	4-inch.
4	3-inch.

Stop-Cocks.

2	2-inch.

Blow-off Pipes.

12	$1\frac{1}{2}$-inch.

There have been 507 supply-pipes put in during the year, making the number now in, 3,117.

The expense for care and repairs for the past year has been unusually large in consequence of the very cold weather during the past winter, the frost in some places penetrating six and a half feet deep, freezing many of the supplies, and several of the dead ends of main pipes, where there was no circulation of water. There were three sets of men employed for four months, most of the time in thawing out frozen pipes.

The main pipes have been lowered in River and Kinnaird Streets, and 47 supplies connected with them, and other pipes which froze up last winter have been lowered during the season.

Number of leaks in supply-pipes, 16.

Number of leaks in main pipes (iron), 123, 102 of which were at the joints of 3, 4, and 6-inch pipes, 6 from defect in pipes, 1

from a 12 inch and 3 from 20-inch pipes broken, and 3 at joints of 10-inch pipes where leaks were caused by settlement.

8 leaks in cement-pipes, 4 of them from driving-cocks rusting at the connection with iron, requiring new iron pipes to be put in — 4 of them from leaks through main pipe caused by settlement, and one from the blow of a pick, where parties were excavating for drain.

3 leaks in log, and thirty feet of log were taken out, and a 3-inch iron pipe laid with quarter bends, to give the town of Somerville room for a sewer which came directly against the log.

Water was blown off from iron pipes 30 times, and from lead pipe twice.

There have been 20 new hydrants set during the year, and 5 new ones to replace old ones taken out.

There have been 15 new meters set during the year, 3 of them in place of old ones taken out and of little or no value, except for old metal, making 27 meters now set; and in all cases where a large quantity of water is used the rates have increased, in some places very largely, although the parties had complained of the amount of their bills before meters were set on their premises.

Average number of gallons pumped daily the past year	1,732,755
Average number of gallons pumped to Reservoir and Stand-pipe for each hundred pounds of coal burned	56,020
Average daily increase over last year . . .	471,295

STATEMENT

OF STOCK ON HAND PERTAINING TO CONSTRUCTION, EXCLUSIVE OF TOOLS.

1	36-inch cast-iron pipe.
2	24-inch cast-iron pipes.
4	20-inch cast-iron pipes.
2	16-inch cast-iron pipes.
9	12-inch cast-iron pipes.
1	10-inch cast-iron pipe.
3	8-inch cast-iron pipes.
295	6-inch cast-iron pipes.
145	4-inch cast-iron pipes.
1	24-inch cast-iron Y.
2	24-inch cast-iron $\frac{1}{4}$ bends.
1	6-inch cast-iron $\frac{1}{4}$ bend.
10	10-inch cast-iron $\frac{1}{8}$ bends.
5	6-inch cast-iron $\frac{1}{8}$ bends.
4	4-inch cast-iron $\frac{1}{8}$ bends.
1	24 × 20 inch cast-iron T.
1	24 × 16-inch cast-iron T.
1	24 × 6-inch cast-iron T.
4	20 × 6-inch cast-iron T's.
3	12 × 6-inch cast-iron T's.
8	12 × 4-inch cast-iron T's.
1	10 × 6-inch cast-iron T.
14	6 × 6-inch cast-iron T's.
11	6 × 4-inch cast-iron T's.
25	4-inch cast-iron T's.
6	3-inch cast-iron T's.
1	20 × 6-inch cast-iron cross.
1	12 × 6-inch cast-iron cross.
17	6 × 6-inch cast-iron crosses.
13	6 × 4-inch cast-iron crosses.
25	4-inch cast-iron crosses.
2	3-inch cast-iron crosses.
2	24-inch cast-iron sleeves.
2	20-inch cast-iron sleeves.
1	16-inch cast-iron sleeve.

3	12-inch cast-iron sleeves.
2	10-inch cast-iron sleeves.
2	8-inch cast-iron sleeves.
6	6-inch cast-iron sleeves.
10	4-inch cast-iron sleeves.
9	3-inch cast-iron sleeves.
1	24 × 10-inch cast-iron reducer.
4	12 × 6-inch cast-iron reducers.
9	6 × 4-inch cast-iron reducers.
7	4 × 3-inch cast-iron reducers.
1	4-inch cast-iron set-off pipe.
4	hydrant frames and covers.
2	gate frames and covers.
6	hydrant bends.
12	hydrant boxes, wood.
13	gate boxes, wood.
1	24-inch gate.
1	20-inch gate.
1	16-inch gate.
1	12-inch gate.
1	10-inch gate.
1	8-inch gate.
9	6-inch gates.
7	4-inch gates.
12	3-inch gates.
	2,400 lbs. lead.
	200 lbs. hemp packing.

Respectfully submitted,

WM. H. PRATT,

Superintendent.

REPORT

OF

THE SCHOOL COMMITTEE.

The School Committee are happy to report the erection, during the last year, of three new buildings for Primary Schools. In the main, they are well planned and judiciously located, one being in Reed Street, Ward V., another in Putnam Street, Ward I., though intended chiefly for the accommodation of Ward IV., and the third on the site of the old Boardman School. Each of the two former is a wooden structure, containing four rooms and accommodations for 224 pupils. The new Boardman School is a brick edifice, having eight rooms and seats for 448 children. They were built none too soon, as they are already, or will soon be, occupied nearly to their full capacity; and it needs but a glance at the statistics appended to this Report, and a brief consideration of the rate at which our population is increasing, to convince us that, in future, one or two new school-houses must be built annually, and their probable cost ought to be added to the usual estimate of the ordinary expenditures for the ensuing year. The Harvard Grammar School is already packed with pupils even to its attics; and the Washington is overflowing its present accommodations, so that the Primary School, which now occupies the rooms on the ground floor, must soon find shelter elsewhere. A new Grammar-School building ought to be erected next year in Ward II., and a Primary-School edifice in Ward IV.

The annual cost of the schools is already so great, that they ought to be managed with the strictest regard for economy. For this reason, female teachers should always be employed, when they are competent for the work, in preference to males. Much of the success of our Grammar Schools is fairly attributable to the excel-

lent assistant teachers, who perform far the greater part of the work of tuition in them, and who need the help of a male principal only in some details of discipline, and in the general arrangement and conduct of the school. One reason why our High School had become so expensive as to cause very general complaint was, that four male teachers had been employed in it, and only five females, to teach 290 pupils; hence the aggregate of salaries paid was $11,700, being an average of over $40 for each pupil, in addition to a heavy extra charge for chemicals, apparatus, and books. By merely dispensing with the services of one of these male teachers, without omitting a single study or curtailing the amount of instruction in the slightest degree, the average cost has been reduced to little over $33; and it is hoped that an equally great saving may be made in the incidental expenditures of this school.

In every other department and office of our municipal administration, men alone are employed. Let the work in our schools be reserved as far as possible for women; they need its emoluments, as their range of occupation is so limited; their labor is much less expensive, and at least equally efficient, as they excel in gentleness, tact, and quickness of perception; and their mere presence in the room has a soft and humanizing effect over their pupils. Better instruction has never been given, even in Cambridge, than by many of the past and present female teachers in our High and Grammar Schools.

The Cambridge schools appear generally to have had a successful year's work, and to be now in a quiet and prosperous state, the reports concerning them by their respective sub-committees being almost without exception favorable. More particular information respecting their separate and comparative merits, defects, and wants may be expected from the Annual Report of the Superintendent of Schools, who, of course, has had larger opportunities of observing them all, and estimating their relative excellence, than any member of this Board. Looking to his Report for details, we have only to consider here any features of our school system as a whole that may appear deserving of comment.

Our Public Schools offer an excellent education, free of charge except for text books, to every child in the city who is able to remain in them long enough to complete the course. Unfor-

tunately, so many years are required for this end, that only an insignificant fraction of the whole number of children reap the full advantages of the system; more than half of them drop away before they have half completed the stated work of the Grammar Schools; and about one third of the whole number do not stay long enough even to enter these schools. The children leave, not because, even in their own opinion or in that of their parents, they have learned enough, but because circumstances will not allow them to remain any longer, — because their services are needed at home, or in some occupation in which they can earn a pittance for their own support. It appears from the returns that about one third of the children remain in school hardly four years; that is, they obtain, under our present system, only a meagre Primary School education. About two thirds remain less than seven years, and are thus able to complete only half of the Grammar School studies. Only from 13 to 16 per cent. remain ten years, so as to be fitted even to enter the High School; and but three per cent. complete the course by graduating at this school.

In July, 1868, there were sent up from the Primary to the Grammar Schools 548 children, of the average age of just ten years; in July, 1867, 517, averaging ten years and one month; in July, 1866, 469, averaging nine years and eleven months. Thus the average age of the children, when they have completed the Primary School course, is ten years; and as most of them were five or six years old when first admitted to the Primary Schools, it appears that four years are ordinarily required for passing through this first stage of their studies. This is what we should expect from the present arrangement of these schools, as the children in them are divided into four classes, and a year is usually consumed in passing through each class.

In the Grammar Schools, the pupils are divided into six classes, and usually remain one year in each class, so that the course here ordinarily requires six years. A few, however, perhaps a quarter part of the whole number, are enabled, by superior quickness and ability, to "jump a class," so as to graduate from these schools in five years. But of the 500 pupils who annually enter the Grammar Schools, only a little over one hundred stay long enough to graduate. The number sent from them to the High School, in 1865, was 100; in 1866, it was 98; in 1867, it was 94; in 1868, it was 124

The average age of these, for the last two years, was 14 years and $7\frac{1}{2}$ months. These figures confirm our previous conclusion, that at least nine, most frequently ten, years are required for passing through the two lower grades, and thus entering the High School. Four years more are needed for the High School course; so that a pupil cannot graduate at this school under the age of eighteen or nineteen years, unless indeed he has received a portion of his education at a private school, where the same work is done in much less time. Accordingly, we find that some children are removed each year from our Grammar Schools, in order to be placed in some private institution, where two years' work can be easily compressed into one. As very few pupils can remain at school till they are over 18 years old, we find, what might be expected, that of over 100, who annually enter the High School, only 20 or 30 remain to graduate, and these are chiefly girls or candidates for College. During the last three years, 97 have been admitted to the High School who were prepared for admission either by private teachers, or in some other institutions than our own Grammar Schools.

As there are about 3,200 children in the four years' course of our Primary Schools, about 800 enter them each year. At the end of the four years, only about 550 remain and enter the Grammar Schools. After five or six years more, little over 100 are left, to enter the High School; and here another four years' course reduces the 800 who commenced, to about 30 who complete, their education in our Cambridge public schools.

These facts are very significant, and it must be confessed that they are not creditable to the system upon which our schools are arranged and conducted. We have been too easily satisfied with the orderly and well-disciplined appearance of the scholars, and with the thorough acquaintance with their prescribed studies which they manifested on examination, and have never thought of asking how much time was consumed in accomplishing these results, or whether, as a consequence of requiring so much time, the upper, more valuable, and more expensive half of the course of instruction did not exist for the exclusive benefit only of a mere fraction of the whole number of children. Unquestionably, the most desirable improvement that could be effected in our school-system would be, to reduce the average age of admission to the Grammar

Schools to a little over eight, that to the High School to a little over twelve, and that of graduation at the High School to a little over sixteen, years. We should thus more than double the utility of the upper half of our school-course, as the change would probably increase nearly threefold the number of pupils in this upper half.

That such an improvement is practicable, there can be no doubt. In Boston, says the Superintendent, the pupils are "generally from eight to nine years of age at the time of admission" to the Grammar Schools.[1]

Yet, as appears from the programme of studies, rather more proficiency is required for promotion from the Primary Schools of Boston, than from those of Cambridge. Any private teacher, and many parents who have attended to the education of their families, are well aware that children who begin the alphabet at six years old can easily be qualified, and well qualified, to enter the Grammar School in two years. And that the time spent in the Grammar Schools also is needlessly long, appears from the fact already mentioned, that children are not unfrequently withdrawn from them and put into a private school, where they can do what would otherwise be two years' work in one. It is proved also by the testimony of the teachers themselves, that children at an age considerably below the average are not found too youthful, or with minds not sufficiently developed, for the tasks imposed on them. On the contrary, the few who enter the Grammar Schools at eight, or the High School at twelve years old, usually excel those who are much older, in the quickness and ease with which they accomplish their work.

The chief cause why so much time is wasted is, that our schools are organized on what may be called the *annual* plan; that is, the stated time for passing through one class is one year, and promotions generally take place only once a year, either from one class to another, or from one school to another. A year's interval between the studies of two successive classes is too great to be "jumped" even by a diligent and very successful pupil, without leaving a gap which is both an injury to that pupil, and a great inconvenience to the teacher. Consequently, the whole class, often from sixty to one hundred in number, must advance abreast; and then, of

[1] *Boston School Report* for 1867, p. 234.

course, the speed of all, even of the quickest, must be regulated by the speed, or rather by the slowness, of the feeblest and dullest scholars; just as the strength of a chain is measured by that of its weakest link. If it were not, the class would appear unequally, and therefore imperfectly, prepared for the test of the next examination, and the teacher's reputation would suffer. What is still worse, it is the interest of the teacher to keep back the best scholars from promotion at irregular periods, even when they richly deserve it; for to part with them before the ordinary time is to sacrifice the best chance of the class appearing creditably at the next general promotion. Even degradations of the indolent and stupid to a lower class are not so frequent as they should be, since a teacher naturally hesitates to take so grave a step as to put back a pupil for a whole year, though she would readily do this for six months, if it were possible. Surely the plan in the Boston Primary Schools is preferable, where, though there are six classes, promotions from one to another, and from the Primary to the Grammar School, take place every six months, the whole course thus occupying only three years. For the great majority of the children, the fourth year in our Primary Schools is so much time absolutely wasted.

In our Grammar Schools, it is true, there is a real Principal, and a consequent gain in uniformity and efficiency of action throughout the school. But the reputation of this Principal as a teacher, though not as a disciplinarian, depends almost exclusively on the appearance of his first class at the final examination for admission to the High School; and therefore it is his interest that all doubtful cases should be kept back, and this First Class should be as small as possible, embracing only the flower of the school. In fact, it seldom comprises more than one twentieth part of the whole number of pupils. We would recommend, at least as an experiment for a few years' trial, that a class should be admitted from the Primary into the Grammar School twice a year, at the end both of the winter and the summer terms; that promotions from each of the five lower classes to the class above should take place every six months; that each of the six classes should consist of two divisions, an upper and a lower, advancing at different rates of speed, both promotions and degradations from one of these divisions to the other taking place weekly, or even daily, since the fre-

quency of such removals would be a very efficient means of discipline, and of rewarding effort, and punishing sluggishness; that both divisions of the First Class should be offered, at the end of the year, for admission to the High School, it being understood, however, that the Grammar master is responsible for the success only of the first division, those in the second half "running for luck," as the phrase is, at the examination, since their success would obviously depend on special and extraordinary effort on their part during the six months immediately preceding. The adoption of this plan would render it perfectly feasible for very bright and industrious pupils to pass through the Grammar School in three years; the great majority of them would undoubtedly require four or five years; and a few dullards might drag the chain for the present full period. A scholar now passes from one class to another, and from one grade of schools to another, at as fixed a period, and with as little effort on his part, as a calf grows to be an ox; only the calf gains flesh far more rapidly than the child gains knowledge.

One of our oldest and best primary-school teachers says, in her last annual report, "I can prepare a class once in six months to enter the next class above. I do think there should be more individual promotion among our scholars who attend the Primary Schools."

The following extracts from the reports of three other Primary teachers, show that classes *can* be "jumped" even under our present annual system; and of course, such cases would be far more frequent if the term were shortened to six months.

1. "More than one half of the first class were taken up from the third. The second class is composed of the most stupid ones from the third, and filled up with the brightest from the fourth class. The third class is made up of the poorest in the fourth, and the most capable from the spelling class."

2. "Two members of the third class, prepared for promotion, entered the Grammar School. Two little scholars from the fourth were considered qualified for entering the second class."

3. Besides nineteen who entered the Grammar School in July, "nine more were admitted from the present first class in September, making a total of twenty-eight. Four scholars have been promoted from the third class to the first.'

We commend these cases, — and there may be others like them, — for study and imitation by all the Primary teachers. It is obvious that such promotions can be systematically made only under the direction and by the authority of a Principal of the school; for an *independent* teacher of a lower class might not always relish having the best materials from the class below jumped over her head into the one above; and the teacher of the upper class might not be perfectly willing to receive those who had not gone through the full measure of training in the initiatory steps. But if such promotions were frequent, more time would be occupied by regular school-work, and yet an opportunity would be left for amusements enough to keep the children quiet and occupy their leisure.

One great reason why so many years are now required to complete the school course is, that the working period in each year has been recently so much shortened, first, by lengthening the summer vacation; secondly, by cutting off one hour from the afternoon sessions; and lastly, in the case of the High School, by giving up the Saturday sessions altogether. A few years ago, the summer vacation was only six or seven weeks long; in 1868, it continued nine weeks. Add the three shorter vacations and the usual holidays, and it appears that there were, in 1868, about thirty-nine weeks of work, and thirteen weeks of vacation. Allow four hours a week more for recent reductions of school time, — in the case of the High School, by giving up the Saturday sessions, and for the other schools by shortening the afternoon's work, — and it appears that the working period was really equivalent to about thirty-four weeks.

Believing this amount of vacation to be excessive and injurious, not only because, by lengthening the time required for a complete school education, it diminishes the number who can obtain such education, but because, for more than a third part of every year, it turns out thousands of children into the streets, there to forget and to unlearn what they had previously learned in the schools, the present Board have attempted with caution, — many will think with too much caution, — to remedy the evil. We have reduced the summer vacation to about seven weeks, — several of us would have preferred six weeks, — and we have required for the High School three hours of exercises, not demanding much

study or toil, on Saturday forenoons. The afternoons throughout the week still afford abundant time to enable the High School girls to practice music and household duties, and the boys to invigorate themselves by out-of-door work and play; since the evenings enable them to study the short lessons which alone they are required to learn out of school. One Primary School Report says, "The long summer vacation had erased all the impressions of school order from the minds of some of those boys who had been allowed the full benefit of street-teaching; and again corporal punishment was administered to some boys;" and another alludes to the loud complaints of parents about the length of the vacation, though the same persons inconsistently allowed their children to be frequently absent in term time. The Annual Report from the High School says, "The last hour of the Saturday session is devoted to music, to which, for the last four years, the last hour of Friday had been given. *Now*, we have five full days in the week for the regular exercises, and time on Saturday for miscellaneous work. I believe that these three hours on Saturday are as useful as any other three hours of the week."

Indeed, considering the amount of time, nearly twenty per cent., saved for this seminary by our recent legislation, it becomes a question whether by still further consolidating the studies, we may not afford a more perfect education to those who are now allowed to graduate in the shorter or three years' course, and even to introduce the study of German into the fourth year. At present, there are three distinct courses in the programme, namely, the Classical, the complete English course, and a shorter or three years' English course. As these three are not made so nearly parallel as they might be, time and labor are wasted by the necessity of going over the same ground again and again with very small classes, instead of traversing it once for all with a single division. The School Committee for the next year will probably recognize the necessity of a new arrangement and distribution of the studies in the High School course.

Our School Regulations expressly require that all the teachers shall be elected annually, all being considered candidates for reëlection who do not signify a wish to the contrary. A similar rule exists elsewhere, its obvious and proper purpose being to afford an opportunity, at least once every year, quietly to drop an

inefficient or incompetent instructor, against whom there may not be any distinct cause of complaint, except the general fact that his or her school or class is not in a satisfactory condition. The laws of the Commonwealth also expressly authorize the School Committee to "dismiss from employment any teacher whenever they think proper;" but it has not been usual to exercise this power at any other period than that of the annual election, except for specific and grave reasons. If dismissed before the expiration of the year for which he or she was elected, the teacher would have a moral, though not a legal, right to ask that good cause should be shown for a seemingly harsh procedure. But it is the bounden duty of the School Committee to choose the best possible teacher; and they are guilty of a dereliction of duty if they appoint one of inferior merit, solely on the ground that he or she has held the office, though probably unworthy of it, during the previous year. Nothing would be so injurious to the schools as the right of any feeble or indolent teacher to cling to his position like a barnacle to a ship's hull, because he unluckily once found a place there, though he has never been anything but an impediment to the ship's motion. We still have teachers who have been in service for twenty or thirty years; and this is highly creditable to them, because they might have been dropped at any time. If they held office on a life tenure, their long term of service would tell rather to their discredit than to their recommendation. The best efforts of any incumbent can be secured only by the possibility, and even the probability, of being displaced just as soon as his efficiency is diminished. We cannot tolerate merely negative merit; not to do harm is not enough; he must do good. And the right of displacement must not rust by disuse; it must be freely, though never wantonly, exercised. There is no fear that the right will be exercised frequently or without grave reasons, the act itself being an unpleasant one, and liable to much criticism and reproach. Out of one hundred and twenty-five teachers employed by the city, we believe that not more than six or eight have in any one year failed to be reëlected, except by their own wish. Often not more than two or three are dropped; sometimes not any.

It would be unjust to the teachers to make no mention of what is the chief difficulty in their work and the greatest obstacle to the improvement of the schools. To preserve order and good disci-

pline in a large school, consisting in a great degree of children from the poorer classes, many of whom never see a book at home, are not trained there to habits of obedience and quiet conduct, but spend most of their time in the streets, is of course an irksome and laborious task, requiring much energy and tact, and constantly impeding the proper work of instruction. Strict order and prompt obedience are indispensable requisites of a good school. At what cost of time, effort, and watchfulness these ends are secured, may be easily learned from the Record Books, which are now carefully kept, of the conduct of every scholar. It is pitiable to learn from these minute accounts how much care and labor, how much work in and out of school, by every teacher, are monopolized by the "bad children," or as we should rather say, by children brought up under bad influences at home, who constitute not more than five or ten per cent. of the whole number of pupils. The worst cases of this sort are frequently referred to the Committee, and four or five flagrant instances were discussed at a recent meeting of the Board. It was found hard to tell what to do with them. Some advocated their expulsion or suspension for long periods, and others thought corporal punishment might be the proper remedy. But against the former course, it was urged, that it would take away the benefit of school instruction and discipline from the very class of children who had most need of them, and by turning them into the streets, would train them effectually for the schoolship and the jail. Against the latter course the usual arguments against corporal punishment were urged. More than six months ago, a sub-committee was appointed to consider the expediency of establishing one or more special schools for the reception of disorderly pupils; but they found the plan hedged about with difficulties, and have not been able to report. To congregate such children together is to encourage them in evil-doing by the presence of each other, and to deprive them of the benefit of good examples. Such institutions would be reform schools instead of schools of instruction, and rather than enter them, both parents and children would prefer to give up school altogether. At least three of them would be needed in different localities of our large city, and as they could be managed only by male teachers, the cost of establishing them would be heavy. Unquestionably these "bad children" have their rights, and their just claims upon our sympathies, our

efforts, and our school system. But we think the 90 or 95 per cent. of "good children" have *their* rights also, which certainly are infringed when one third or one half of their teachers' time and best energies must be given to such unprofitable material, forming only a small fraction of the school. Under our present system, the proper place of at least one half of these incorrigible pupils is in the school-ship, the almshouse, or the penitentiary.

To show the magnitude and the pressing nature of the evil here referred to, we present a few extracts from the Annual Reports recently made to us by the teachers of the Primary Schools.

1. "Some of the children are entirely beyond the control of their parents, and almost daily requests come to the teachers to punish them in such a way as to compel their attendance. It is no unusual thing for boys to be out of school three or four days without the knowledge of their parents. The teacher would suggest that this matter calls for immediate attention, for only by such children as are *made* to do right will right be done."

2. "One unruly boy has an unhappy influence on the whole school, and often causes trouble and confusion to supersede quiet and order. The scholars with two or three exceptions have behaved well, and cheerfully conformed to the rules of the school. There are some boys who appear to be devoid of kindly feelings, and on whom all gentle persuasion or remonstrance appear to be thrown away. It is such children who are a constant trial to the teacher."

3. "There have been but few cases of corporal punishment during the year, none during the last six months. Several scholars have been sent home for misconduct with notes to their parents, and some have been sent to the Committee. In many instances, the parents have complained of this mode of discipline, and have said they wished their children could be punished at school. For a Primary School, there is an unusual number of large scholars, many of whom are foreigners; some of them show a daring and lawless spirit, and are hard to govern."

4. "I earnestly wish that the deportment of the school might be improved, and that the behavior of some scholars should not be allowed to injure by example the quiet and well-behaved inclinations of others. But I find myself unable to suggest any remedy that would be practicable; since schools as well as com-

munities are made up of the various natures, orderly and disorderly, and the separation of the well disposed from the evil disposed is never accomplished."

5. "The greater part of the scholars are orderly and punctual. Several boys are troublesome and hard to govern. I had three boys whose parents said they found it impossible to control them at home."

6. "I would have strict and prompt obedience, without compulsion if possible, but exacted at all events. This lesson must be learned by all, and when more easily than in childhood. Children are keen observers, and know well when justice is done. I commenced the year, feeling that I must either have control of my school or resign. Last year's effort to avoid corporal punishment had made such a change in everything, that I almost dreaded to enter my room. I have punished more this quarter; and yet their prompt attendance, their bright happy faces and cheerful greetings, assure me that the school-room is no prison to them."

These few extracts point out distinctly enough the nature of the evil. It will be for our successors at this Board to devise and apply, if they can, a remedy. We do not intend hereby to express any opinion for or against the expediency of corporal punishment in the schools; and we present the following figures to show how much the frequency of such punishment has diminished in our schools during the last three years: —

CORPORAL PUNISHMENT. — GRAMMAR SCHOOLS. 1866.

School.	Oct.	Nov.	Dec.	Teacher's No.
A	–	2	–	1
B	4	–	–	2
B	1	–	–	3
B	2	–	3	4
B	4	3	1	5
B	1	3	–	6
C	9	9	7	7
D	7	4	–	8
E	2	5	1	9
E	–	2	2	10
E	–	1	1	11
E	–	2	1	12
E	19	2	4	13
E	5	–	1	14

CORPORAL PUNISHMENT. — GRAMMAR SCHOOLS. 1867.

School.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.	Oct.	Nov.	Dec.	Teacher's No.
E	1	–	4	–	2	1	–	–	1	1	–	9
E	–	–	–	1	–	–	–	–	1	–	–	11
E	1	–	2	2	2	1	–	–	1	–	–	15
E	–	2	–	2	1	3	–	–	–	–	–	13
E	–	2*	3	1	3	–	–	–	2	1	–	16
E	–	–	2	–	1	–	–	–	–	–	–	17
E	–	1	1	–	–	–	–	–	1	1	–	10
F	–	–	–	–	7	–	–	1	3	–	–	18
F	–	–	–	–	–	3	–	9	1	–	–	19
A	10	–	14	–	–	–	–	–	7‡	–	18‡	1
D	–	–	5	2	3	–	–	–	3	2	–	8
C	–	–	11	–	–	–	–	6	4	4	–	7
B	1	1	2	–	–	–	–		1	–	–	2
B	1	–	1	–	–	–	–		–	–	–	3
B	–	–	2	–	–	–	–	16†	–	–	–	6
B	1	–	3	–	–	–	–		–	–	–	4
B	1	1	7	–	–	–	–		4	2	–	20
B	–	–	–	–	–			–	1	–	–	21
B						–	–		4	3	–	22
B	–	–	–	–	–	–	–	–	2	–	–	23
D	–	–	–	–	–	1	3‡	–	–	–	–	24 25
G	–	–	5	6	6	8	5	6	6	–	8	26

* No. 12 left March 1st. † One quarter. ‡ Same boy 3 times.

CORPORAL PUNISHMENT. — GRAMMAR SCHOOLS. 1868.

School.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept	Oct.	Nov.	Dec.	Teacher's No.
D	–	–	–	12	3	6	1	–	–	–	–	8
E	–	–	–	–	1	–	–	–	–	2	1	9
E	1	–	–	–	2	–	–	1	–	–	–	10
E	–	–	1	–	–	–	–	–	–	–	–	16
E	–	–	1	–	–	–	–	–	2	2*	–	11
E	1	–	–	–	–	–	–	–	–	–	–	17
E	–	–	–	–	–	–	–	–	–	–	1	27
C	4	–	–	–	2	–	–	–	–	2	–	7
A	–	–	3	4	3	7	–	–	2	3	–	1
B	–	–	2	–	–	–	–	–	–	–	–	28
B	–	–	1	–	–	–	–	–	–	–	–	29
B	–	–	–	–	–	–	–	–	3	–	–	20
B	–	–	–	–	–	–	–	–	2	–	–	23
G	8	7	7	–	–	–	–	–	–	–	–	26
F	6	–	–	–	–	–	–	–	–	–	–	19

* Same boy twice.

CORPORAL PUNISHMENT. — PRIMARY SCHOOLS. 1866.

School.	Oct.	Nov.	Dec.	Teacher's No.
a	8	3	6	30
b	–	–	2	
c	8	6	5	
d	10	11	4	
e	–	–	2	
f	24	8	–	31
g	2	2	–	32
g	2	2	–	33
g	1	1	–	34
g	3	3	–	35
h	3 b. 2 g.	12	3	36
i	17 b. 3 g.	24 b. 16 g.	25 b. 1 g.	37
i	5 b. 2 g.	12 b. 6 g.		38
j	14 b. 2 g.	3 b. 3 g.	–	39
k	19	5	6	40
k	16	5	3	41
k	5	1	–	42
l	2*	1	4	43, 44
m	–	2	2	45
n	7	4	4	46
o	3	5	3	47
o	7	7	6	48
p	27	9	5	49
p	9	10	1	50
p	9	2	2	51
q	20	3	9	52
q	6	1	4	53

b indicates boy; *g*, girl.

CORPORAL PUNISHMENT.—PRIMARY SCHOOLS. 1867.

School.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.	Oct	Nov.	Dec.	Teacher's No.
a	2	2	3	2	6	–	–	5	5	–	–	30
a	2	2	3	7	7	6	–	5	4	–	–	54
a	–	2	2	1	4	*	*	*	*	*	*	55
a	*	*	*	*	*	*	*	3	1	–	–	56
a	–	–	2	3	3	2	–	2	–	–	–	57
c	–	–	–	–	–	–	–	1	5	1	–	58
c	–	–	–	–	–	–	–	–	1	–	–	59
d	–	–	–	–	–	–	–	–	–	5	–	60
d	–	–	–	–	–	–	–	–	–	–	b. g. 8 2	61
r	–	–	–	–	–	–	–	–	2	–	–	62
e	–	–	–	–	–	–	–	2	1	2	3	63
s	–	–	12	13	9	b. g. 1 3	–	–	b. g. 1 5	b. g. 2 2	b. g. 1 3	31
												64
g	5	–	2	3	–	–	–	–	–	–	–	32
g	–	–	–	1	–	–	–	–	–	–	–	33
q	3	3	9	b. g. 8 1	4	b. g. 6 1	1	*	–	*	*	53
q	*	*	*	*	*	*	*	b. g. 4 1	*	–	–	65
q	8	3	5	1	4	4	–	4	–	–	–	52
p	5	6	7	8	b. g. 2 1	5	3	b. g. 2 1	–	–	–	49
p	11	2	4	b. g. 1 2	–	–	–	–	–	–	–	50
p	–	3	4	6	–	b. g. 4 1	–	–	–	–	–	51
l	2	2	–	–	–	–	–	–	–	–	–	66
o	2	–	2	–	–	–	–	–	–	–	–	47
o	2	3	4	–	–	–	–	–	–	–	–	48
o	–	–	–	–	–	–	–	–	–	b. g. 21 8	5	67
m	–	1	3	–	–	–	–	–	–	–	–	68
k	5	–	8	–	–	–	–	–	–	5	–	40
k	–	–	–	–	–	–	42†	–	10	–	–	
k	1	–	–	–	–	–	–	–	–	–	–	42
k	–	–	5	–	–	–	–	–	–	4	–	41
j	–	–	4	b. g. 4 1	–	b. g. 3 2	–	14	6	10	–	36
i	14	3	12	19	11	9	5	5	7	4	–	38 / 69
s	–	–	–	–	–	–	–	–	8	–	–	70
n	–	b. g. 1 2	1	–	–	–	–	–	20‡	–	–	46

† Six months.

‡ From September 14th to October 1st.

CORPORAL PUNISHMENT.—PRIMARY SCHOOLS. 1868.

School.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.	Oct.	Nov.	Dec.	Teacher's No.
r	4	–	1	–	–	4	–	–	–	6	–	62
c	–	–	–	1	2	3	–	–	–	–	4	58
e	3	–	–	–	6	4	–	3	4	3	4	63
e	–	–	–	–	–	–	–	–	1	–	–	64
j	–	–	1	1	–	1	5	–	1	–	–	36
l	–	–	–	–	–	–	2	–	–	–	–	66
k	–	–	–	12	1	–	–	8	7	–	–	71
k	–	–	9	–	–	–	–	–	–	–	–	72
k	6	–	5	–	–	–	–	–	–	–	–	41
i	2	2	1	–	1	–	–	–	–	–	–	69
i	–	–	1	–	–	–	–	–	–	–	–	38
i	–	–	–	–	–	–	–	–	–	8*	–	73
d	–	–	6	–	–	–	–	8	6	4	–	61
	b. g.											
q	2—1	1	1	–	–	–	–	–	1	–	–	65
s	2	–	–	–	–	–	–	2	2	–	3	70
s	–	–	–	–	–	–	–	–	1	–	–	74
a	–	–	–	–	–	–	–	–	1	–	–	75
b	–	–	–	–	–	–	–	–	6	6	4	76
n	–	–	1	2	–	1	–	–	–	–	–	77
	b. g.											
f	1—2	–	–	3	2	–	–	–	3	–	–	31†
t	–	–	–	–	–	–	–	–	–	–	4	78
t	–	–	–	–	–	–	–	–	–	–	5	79
t	–	–	–	–	–	–	–	–	–	–	2	80
u	–	–	–	–	–			–	–	–	3	41
u	–	–	–	–	–	–	–	–	–	–	3	81
u	–	–	–	–	–	–	–	–	–	–	4	40

* Three months. † The pupils in this school are all foreign of parentage.

SUMMARY. GRAMMAR SCHOOLS.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.	Oct.	Nov.	Dec.	Total.	No. Scholars.
													Jan. 1, 1867.
1866	–	–	–	–	–	–	–	–	54	33	21	108	2,334
1867	16	7	62	14	25	17	8	38	42?	14?	26	269	2,334
													Jan. 1, 1868.
1868	20	7	15	16	11	13	1	1	9	9	2	104	2,839

PRIMARY SCHOOLS.

	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.	Oct.	Nov.	Dec.	Total	No. Scholars.
													Jan. 1, 1867.
1866	–	–	–	–	–	–	–	–	236	167	97	500	2,981
1867	62	35	92	81	51	47	51	49	76	64?	19	627	2,981
													Jan. 1, 1868.
1868	23	3	26?	19	12	13	7	21	33	27?	36	225	3,025

As appears by the records of the Secretary of the Board, in nine of the twenty-five Primary Schools no corporal punishment has been reported during the past year. In one of the Primary Schools, composed entirely of children of foreign parentage, no corporal punishment has been inflicted for several years.

CHARLES H. SAUNDERS,
Chairman ex officio.

EDWARD ABBOTT,
FRANCIS BOWEN,
EDWIN B. CHASE,
FRANCIS J. CHILD,
MARTIN DRAPER, JR.,
JOHN W. HAMMOND,
HAMLIN R. HARDING,
HENRY O. HOUGHTON,
GROVE H. LOOMIS,
ASA P. MORSE,
JAMES R. MORSE,
THOMAS SCULLY,
JOSEPH H. TYLER,
MORRILL WYMAN.

School Committee.

To prevent a misapprehension which might be occasioned by our subscribing a report in which an expression of opinion with regard to the operation of the law restricting corporal punishment is withheld, while remarks of teachers are inserted which imply a dissatisfaction with existing rules, we feel constrained to express our disapproval of this portion of the Report.

CHAS. H. SAUNDERS,
MORRILL WYMAN,
F. J. CHILD,
H. R. HARDING,
THOS. SCULLY,
EDWIN B. CHASE,
H. O. HOUGHTON,
A. P. MORSE.

We object to so much of the report as approves the restoration of Saturday-work in the High School.

F. J. CHILD,
MORRILL WYMAN.

[The two following paragraphs, belonging in the original draft of this Report, the first at line 11, page 139, and the second on page 143, though struck out by a majority of the committee, express the opinion of the undersigned.]

And the evil would be still further enhanced by any system which would isolate, and render independent, each teacher and class, who, in their own separate room, pursue their own year's work, without any oversight by or dependence on a common head.

Still further; the teacher needs to be stimulated not only by the fear of ejectment, but by the hope of promotion. The worst possible arrangement of a large number of teachers would be, so far to equalize their labor, their responsibility, their authority, and their salaries, that once having secured a position in the school, no change should be possible, no field should be open for ambition, but the incumbent should remain for life in the same post, like an oyster, occupied year after year with the same dull routine. We need a long gradation of trusts, authorities, and salaries, not only that the lower positions may be training-schools for the higher ones, but that every one may be urged to increased effort by the constant hope of promotion and higher pay. Emulation is the motive power, the very principle of life, in our schools; and the teachers need its vivifying influence just as much as the pupils. Yet there is a constant pressure upon this Board, by those in the inferior positions, that they may be made as independent, may have as much authority and pay, as those who are now in offices of higher trust; and the reason which they allege is, that they work as hard and as long, and that their functions are as important as those of a higher grade. All this may be very true; they may even work harder, and to teach the alphabet is even more necessary than to teach astronomy and algebra. But the work will not be so well done in any of the offices, the instruction will be nowhere so thorough, when one post is just as eligible as another, as it would be if a chance always remained for promotion and higher emolument. The equalization plan is impolitic, for it is inconsistent with human nature and with God's plan of human life.

FRANCIS BOWEN,
THOMAS SCULLY.

TABULAR VIEW

OF

THE PUBLIC SCHOOLS OF CAMBRIDGE,

JANUARY 1, 1869.

NAME OF SCHOOL.	TEACHERS.	SALARY.	NO. OF SCHOLARS, JAN. 1, 1869.
High School,	William F. Bradbury . . .	$2,500	285
	Joseph A. Gillet	2,000	
	John Orne, Jr.	1,700	
	Mary F. Peirce	900	
	Caroline Child	700	
	Emma A. Scudder	700	
	Elizabeth M. Fessenden . .	700	
	Frances M. Read	700	
Allston Grammar,	Benjamin W. Roberts . . .	2,000	539
	Lizzie B. Winnett	600	
	Sarah M. Gray	600	
	S. Ellen Hearsey	600	
	Sarah D. Whiting	600	
	Anna F. Stanley	600	
	Emily R. Pitkin	600	
	Emma F. King	600	
	Lucy H. Whiting	600	
	Sarah F. Bryant	600	
	Georgie M. Roberts . . .	600	
	Etta S. Adams	600	
	Loriette Avery	600	
Harvard "	Aaron B. Magoun	2,000	278
	Catharine Richardson . . .	600	
	H. Augusta Dodge	600	
	Ada H. Wellington . . .	600	
	Mary E. Wyeth	600	
	Martha M. Damon	600	
	Lydia S. King	600	
Putnam "	Francis Cogswell	2,000	325
	Sarah M. Burnham . . .	600	
	Anna B. Josselyn	600	
	Maria E. Spare	600	
	Almira L. Hayward . . .	600	
	Sarah Maria Wheeler . .	550	
	Lizzie A. Winward . . .	550	

TABULAR VIEW OF THE PUBLIC SCHOOLS (*continued*).

Name of School.	Teachers.	Salary.	No. of Scholars, Jan. 1, 1869.
Shepard Grammar.	Daniel B. Wheeler	$2,000	278
	Augusta M. Howe	600	
	Emma M. Taylor	600	
	Ella L. Hinman	550	
	Lu A. Butters	550	
	Sara J. French	550	
Thorndike "	Ruel H. Fletcher	2,000	354
	Anna W. Averill	600	
	Eunice B. Dyer	600	
	Martha A. Martin	600	
	Emma F. Monroe	600	
	Rebecca D. Wing	550	
	Orpha M. Fletcher	550	
	Ella W. Clark	550	
Washington "	Daniel Mansfield	2,000	331
	Lucy A. Downing	600	
	Adeline M. Ireson	600	
	Catherine P. Green	600	
	Abby M. Webb	600	
	Eleanor M. Butler	550	
	Mary E. Lord	550	
Webster "	Alvah C. Smith	2,000	512
	Eliza K. Brackett	600	
	Lucille C. Bancroft	600	
	Eliza D. Fisher	600	
	Jane Dallinger	600	
	Helen J. Maiers	600	
	Louise C. D. Harlow	600	
	Isabel B. Merrill	550	
	Gertrude A. Hyde	600	
	Esther F. Hannum	550	
	Carrie L. Smith	600	
Boardman Primary	Mary F. Emerson	550	314
	Mary F. Ball	550	
	Margaret B. Wellington	500	
	Marietta B. Hawes	500	
	Mary F. Stewart	550	
	Mary Agnes Lewis	500	
	Susie E. Merrill	500	
Bridge "	Elizabeth E. Dallinger	600	94
	Emily C. Dallinger	500	
City "	Sarah A. Rand	550[1]	33
Craigie "	Harriet A. Butler	600	123
	Mary E. Willis	500	
Dana "	Maria F. Williams	550	28
Dunster "	Sarah B. Waitt	600	198
	Juliet M. Pickering	500	
	Louise M. Delano	500	
	Sarah E. Stewart	500	
Eastern "	Mary E. Coburn	550	107
	Frances E. Pendexter	550	

[1] $300 and board.

TABULAR VIEW OF THE PUBLIC SCHOOLS (*continued*).

Name of School.	Teachers.	Salary.	No. of Scholars, Jan. 1, 1869.
Felton Primary.	Elizabeth T. Dike	$550	117
	Caroline E. Chester	550	
	Martha A. Culver	500	
Gannett "	Sarah J. A. Davis	550	168
	Lucy C. Wyeth	550	
	Elizabeth M. Davis	500	
	Annie F. Harding	500	
Harvard "	Frances A. Hyde	550	75
Lechmere "	Martha J. Avery	550	46
Mason "	M. Lizzie Evans	600	215
	Julia E. Murdock	600	
	Susan M. Cochrane	500	
	Charlotte E. Watson	450	
Otis "	Abby S. Taylor	600	258
	Sarah D. Mitchell	550	
	Susan M. Pendexter	550	
	Ellen N. Pike	500	
	Julia M. Mighill	500	
Putnam "	Lucy A. Draper	600	99
	Hattie M. Prince	500	
Quincy "	Charlotte E. Jewell	550	112
	Helen E. Morey	550	
Reed St. "	Lucy T. Sawyer	550	216
	Evelyn A. Sawyer	550	
	Emma L. Hutchins	550	
	Martha C. Dickman	500	
Riverside "	Garaphilia M. Beers	500	203
	Helen J. Ward	500	
	Abby A. Lewis	500	
	Jennie C. Osgood	500	
Sargent "	Anna M. Harrod	600	219
	Frances J. Harrod	600.	
	Mary L. Tower	500	
	Fanny B. Messinger	450	
Shepard "	Fanny E. M. Dennis	500	72
	Charlotte A. Ewell	450	
Thorndike "	Martha H. Butler	600	127
	Ada A. Noble	500	
Washington "	Marianne M. Webb	600	164
	Eunice W. Field	550	
	Julia H. Kimball	500	
	Ella F. Webber	500	
Webster "	Mary A. Tarbell	600	169
	Mary E. Sawyer	600	
	Martha E. Redman	500	
Williams Hall "	Anna S. Lamson	600	108
	Kate M. Lowell	500	

Teacher of Music — Nathan Lincoln, $1,600.

SUMMARY.

Number of pupils in High School	285
Number of pupils in Grammar Schools	2,617
Number of pupils in Primary Schools	3,265
	6,167

COST OF INSTRUCTION.

High School	$9,900	for each pupil,	$34.73
Grammar Schools	44,600	for each pupil,	17.04
Primary Schools	35,300	for each pupil,	10.81
Music	1,600	for each pupil,	26
	$91,400		$14.82

Number of pupils belonging to Public Schools, January 1, 1869	6,167
Number of pupils belonging to Public Schools, January 1, 1868	5,864
Increase during the past year	303

Increase of pupils, 1860	272
Increase of pupils, 1861	172
Increase of pupils, 1862	262
Increase of pupils, 1863	226
Increase of pupils, 1864	200
Increase of pupils, 1865	58
Increase of pupils, 1866	243
Increase of pupils, 1867	286
Increase of pupils, 1868	330

Number of Schools	31
Number of Teachers	134

REPORT

OF THE

SUPERINTENDENT OF SCHOOLS.

To the School Committee of Cambridge:—

GENTLEMEN, — In accordance with the requirements of your regulations, I respectfully submit the following, as my first Annual Report : —

In accepting the office of Superintendent of Public Schools, I was not ignorant of the arduous duties, and peculiar difficulties connected with it. I did not forget that the office itself was with you an experiment, tried with many misgivings, doubtless, even on the part of those whose votes established it. I supposed that many, regardless of the merits or demerits of the incumbent, might expect at once manifest and important results. It occurred to me that some might look for the early introduction of plans of educational reform — of methods and systems before unknown, but which would spring into existence as the natural result of the establishment of the office. If any entertained views such as I have described, they have had, or will have, ample opportunity to correct them.

For myself, I made no such mistake. I was aware of the fact that many who have given to Cambridge its high literary renown, have, from time to time, been connected with its School Board ; while many others, known for their professional success, or for their prominence in business circles, have also aided in moulding the present school system. It may well be supposed then, that I am called to this work to carry out that which you have inaugurated, rather than with the hope that I am to devise new plans, or introduce immediate reforms. Here, however, I would not be misunderstood. I trust we shall all be watchful, lest the rapid strides with which the cause of education is advancing, shall leave

us far behind. It is no time to be satisfied with the present. The busy thought of the leading educators of the day, moulded into a form available to all who are willing to be learners — the improvements in school-buildings, school-furniture, the classification of pupils and methods of teaching, all demand of us earnest effort lest we fail to keep pace with the spirit of the age.

I have intimated that I felt great anxiety in entering upon a work beset with so much of difficulty, either real or fancied ; but here I cannot forbear saying, that the kind and cordial manner in which I have been received by all with whom I have been brought in contact, has removed much of such anxiety, and has rendered my labors thus far most pleasant.

In defining my duties, you direct that I shall annually give an account of the schools, and make such suggestions as I may deem advisable. Now I do not flatter myself that I have yet made myself acquainted with the actual condition of the schools, nor can I hope to do so immediately. This must be the work of time. To be sure, I have in every instance definite impressions, formed from what I have seen, but these may be modified much hereafter, when I shall have had opportunity of further observation.

I yield to my inclination so far as to make this Report as brief as possible ; and I do this the more readily, since I feel sure that no report of mine will be needed to supplement the able and elaborate one which may well be expected from the chairman of the Committee on the Annual Report.

It is but giving utterance to a truism to say, that with good teachers, good school accommodations, and a good school system, we shall always have good schools. Good schools, indeed, consist in these, and in nothing else. First of all, and above all, we must have good teachers. With such, we shall never have *poor* schools, however unfortunate we may be in the other conditions of which I have spoken.

From an observation of a few months, I am prepared to say, that for ability, and for fidelity to the great trusts committed to their care, the teachers of Cambridge will compare favorably with those of the other cities and towns in this vicinity. It were folly to assert that all are equally worthy and equally successful ; such a statement would be true of those of no profession nor occupation. What I do assert is, that in each of the grades, a large pro-

portion of all are well fitted by nature, by education, and by experience, for the work they have undertaken. So fully do I appreciate the excellence of these, that should their places from any cause be vacant, I believe it would be exceedingly difficult, if not impossible, to fill them with those of equal worth.

Wherever in the selection of these teachers great care has been exercised, it is certainly worthy of imitation by all having the responsibility of appointments hereafter. Incompetence in those employed in other occupations, may, perhaps, be pardoned, since frequently no higher interest is involved than that of dollars and cents; but who shall estimate the loss to a community, when its children are instructed by those possessing neither the general ability, the tact, the force of character, the elements of moral strength, nor the quick sympathy with childhood which distinguishes the superior teacher?

It must be evident to all that a few of our schools have suffered from the employment of teachers entirely ignorant of the great responsibility they were assuming. In view of the importance of obtaining teachers of experience, joined with the desire we must all feel to aid those educated among us, would it not be well, at no distant day, to establish a Normal or Training Department, where the graduates of our High School, desiring to teach, might in a measure prepare themselves for their work?

School Accommodations.

I have said that with good teachers, we shall never have *poor* schools. I believe this, but at the same time, I just as fully believe that with school-buildings improperly constructed and arranged, we can never have, in the highest sense, *good* schools. Now it is with extreme reluctance that I speak at such length upon the subject of our school accommodations, thus omitting much that you doubtless expect in a report of this kind, and yet I have felt that I should do less than my duty, did I not indicate fully, what in my judgment is the present condition, and also what are, to some extent, the immediate wants in this direction.

The High-School House is an honor and an ornament to Cambridge. I cannot conceive that any citizen can regret his share of the burden in erecting a building, so well meeting the wants of our High School, which stands as the crown of our whole Public School system.

The Grammar-School houses are, with one exception, substantial brick buildings, having an estimated value of about $30,000 each.

The exterior of these houses is certainly fair, but to my mind there is much of deformity within. I greatly fear I shall not be able to convey any correct idea of my impressions when, for the first time, I passed from house to house, and found such peculiar, and, as I think, unfortunate arrangements.

Excepting the Harvard, of which I may speak hereafter, they all seem to have been constructed on the same general plan, and either may be taken as the type of all. The central idea is a large room or hall, containing from 100 to 225 pupils, and having one, two, or three recitation-rooms, as the case may be, connected with it.

In the Allston, differing slightly from the others in point of numbers, the master's room has seats for 220 pupils, and it is fair to assume that it will, at times, contain this number. The first class numbers thirty, and often more, and it is to be instructed by somebody over the heads of a large portion of the army stationed in this immense hall.

In each large room under the charge of an assistant, there are from 100 to 125, and sometimes even more. In the Webster School, one room has 131 pupils and three teachers ; but having but one recitation-room, two teachers are obliged to occupy the same room. I need not say that human enterprise, as manifested in constructing school-houses, has never yet produced a room sufficiently large to warrant such an arrangement.

I have thus briefly indicated the facts connected with the accommodations for this grade, and here I might well leave the subject.

Need I attempt to prove that such a system is defective, if not wholly wrong? It has been tried, and has been abandoned, so far that I know of no prominent educator who advocates it, nor do I know of one single city or prominent town in New England, or outside of it, where it can be found, unless it be in some district where it is tolerated as a temporary evil.

The present arrangement brings under the control of one teacher, so many pupils that he or she is in danger of being overpowered by the mere force of numbers. The energy and strength necessary to preserve order in such a mass of rebellions

humanity, as these crowds sometimes prove to be, wear out the vitality of the teachers, and unfit them for the only proper work belonging to their vocation. We wish to bring teachers nearer to their pupils, to enable them to measure their hearts as well as their minds. Whatever prevents this, whatever tends to create a necessity for *governing* a school, is an irreparable wrong to its victims.

We ask of teachers, that they shall exert a healthful influence upon their pupils; that mind shall be brought in contact with mind; that they shall not merely hear recitations, but that they shall bear to waiting and eager minds something — yes much — of which text-books have never dreamed; something which may be useful to the scholar in future life, or which may enkindle in him a love for knowledge. We are beginning to see that in this direction we must depend upon oral instruction. Now, I ask, can a teacher in the presence of two hundred pupils, belonging to four different classes, be so skillful as to hold the attention of his own class, and not attract the notice of the rest? Can such pupils excuse themselves for failure in recitation, on the ground of being diverted from their tasks? The pupils, in preparing their lessons, should be under the care and observation of the teachers to whom they are to recite. Then, and then only, is it possible to appreciate the work of each, and do justice to all. This will receive the assent of all experienced teachers.

Is it pleasant or profitable to hear the tramp of pupils passing to and from the recitation rooms? On the contrary, is it not a source of extreme annoyance, as well as an excellent means of consuming time without profit to anybody?

Moreover, this system is an expensive one. With single rooms, each teacher generally has about fifty-six pupils, but one hundred and twelve is a very large number to place under the care of one teacher, although she may have an associate to aid her in the work of instruction. We may then somewhat increase the number of pupils to each teacher, and thereby diminish the expense of the schools, while at the same time we shall greatly increase their efficiency, bringing them home to the individual wants of the scholars in a way not now possible.

I advocate no visionary scheme. The system of single rooms has been tried, and has been almost universally adopted.

My desire to improve this class of our schools is my only excuse for thus prolonging this discussion. As I look upon the Grammar Schools, I see a class of teachers, equal, in my judgment, to those of any other city, but working under the disadvantages which I have endeavored to indicate; and could I by any efforts of mine inaugurate the change of which I have spoken, I believe I should do more to advance the interests of these schools than it would be possible to do in any other way.

I would therefore respectfully suggest that you urge upon the proper authorities the great importance of remodeling as many of the Grammar-School Houses the coming season as practicable.

Nearly three years ago, the Committee on School-houses and Estimates recommended the erection of a building for the Harvard Grammar School. In the accompanying report, the committee stated some of the reasons which had induced them to make this recommendation. I am not aware that a single consideration then urged is less valid now; on the contrary, all hold with even greater force than ever before.

"One third of the school has been sent away from the building, to a distant part of the district, difficult for the children to reach, and far from the supervision of the master."

Ought not *immediate* measures be taken to provide suitable accommodations for a school which has suffered so long?

Primary-School Houses.

We have made a beginning during the past year towards putting our Primary Schools on a proper basis. Till now we have had no graded schools of this class, nor has it been possible for us to have, owing to our unfortunate school arrangements. It must not be supposed, that, in the erection of the three houses just completed, the wants of this most important class of our schools are met. It is but a beginning. There are nearly one thousand children belonging to these schools, who now occupy rooms in the Grammar-School buildings; and it is fair to assume that, in every instance, the room will be needed within a short time for the accommodation of the Grammar Schools themselves.

Believing then, that from the necessities of the case, you will soon be obliged to remove these children from their present quarters, I will not stop to cite any of the very serious disadvantages in having primary scholars in Grammar-School Houses.

I would suggest that we need immediately a Primary-School House in Ward Four. This seems imperative. In addition to the school in Williams Hall, the Webster Primary also demands new quarters. One class has now ascended to the very poorly heated and imperfectly ventilated room in the attic, while all will be obliged to leave the building soon, to make way for the rapidly increasing Grammar School.

I believe it would be a great blessing to the pupils in the two schools of which I have spoken, were the new house now ready; but as it is not, I think steps should be taken at once for its erection. Upon this point I quote from the Report of the sub-committee of these schools: "A new School-house which shall accommodate all the Primary School children and more, — a building of the size of the new house on Winsor Street, or, if the City Council prefer, two of the size of the house recently erected on Putnam Street, providing well-ventilated and well-lighted rooms for 450 children, — should be built the next year on or near Magazine Street. This is an imperative necessity, if we would not have the children turned away from the schools for want of room."

We have a few Primary-School Houses, of which the Mason is a type, which, if remodeled, would be convenient and comfortable.

They now have a system of large rooms, having the same disadvantages which I have claimed for the Grammar Schools; and besides, the recitation-rooms are so small, and so poorly ventilated, that it is positively wrong to confine children in them. As the evils of these rooms were fully set forth in the last Annual Report, nothing need be added now. I would respectfully suggest that the City Council be requested to remodel these houses the coming season.

I have failed to express the conviction reluctantly forced upon me, if I have not indicated that, in my judgment, we are at present much behind our neighbors in the matter of school buildings. Charlestown, for instance, has several Grammar-School Houses which may be regarded as models, while they have not a really poor Primary-School room within the limits of the city.

If now the question of expense be raised, I can only say that I believe the citizens of Cambridge are prepared to accept this

truth, namely, that "it is not what schools cost, but what they are worth to the people, that should form our basis of action."

The estimated valuation of Cambridge in 1865 was $25,897,-971, the largest in the State, Boston alone excepted. The valuation in May 1868 was $34,093,800, or an increase of more than thirty per cent.

Lowell, with a population somewhat greater than our own, had an estimated valuation of $20,980,041; and Worcester, also claiming a few more inhabitants than Cambridge, had a valuation of $19,701,244.

In a graduated table, given in the last annual report of the Board of Education, in which all the towns in the State are numerically arranged, according to the percentage of their taxable property appropriated to the support of Public Schools, Cambridge for 1865-66 ranks as seventy-third; for 1866-67 as sixty-fifth.

The present valuation of School-houses in Cambridge, exclusive of the land, is about $338,000, or a little less than one per cent. of the whole valuation of the city.

In connection with the subject of Primary-School accommodations, I wish to speak briefly of the condition of this grade of our schools in other respects. I have already intimated that in my judgment whatever other reforms we may introduce, we ought to *commence* with the arrangements of the School-houses. We must not place under the care of one teacher one hundred and twenty pupils, in a room provided with miserably constructed seats, with no desks or other supports for books or slates, no blackboards, no charts, tablets, or drawing-cards, and then expect good results.

Here, if in any business on earth, we want a proper division of labor. We neither want a teacher overpowered by numbers, nor, having a proper number of pupils, should she be overpowered by too great a variety of work; hence no teacher can take all the grades of a Primary School, and do justice to all. To be sure, she may be able to hear them "read and spell and recite the tables," and this may have answered once, but can do so no longer.

We are beginning to realize that the Primary Schools, as the basis of our whole system of public instruction, and where so many are taught who never enter the higher grades, are of first impor-

These first steps give direction to the whole life.

First of all, I admit we need the right kind of teachers. I concur in the remark of a prominent educator, that "if utter inexperience or desperate mediocrity must sit at the teacher's desk, let it be anywhere, everywhere, save in the Primary School, for anywhere and everywhere else will its ability to do irreparable mischief be less." Having a teacher, we must give her a chance to work. I know no better way than to bring into one room those who are, as near as may be, of equal attainments. Now I do not deem it advisable at this time to indicate what seem to me the proper methods of instructing these who are just passing from the "freedom of home life" to the discipline of the school-room. I will content myself with saying that I believe a skillful teacher with proper school accommodations, with even the lowest class, by conversational exercises, by making use of the concrete but never the abstract, by using that which is known to lead to the unknown, by claiming the aid of those senses, which are so acute even in childhood, will cultivate habits of observation, improve the perceptive faculties, and do much towards securing habits of accuracy in the use of language. Why may not there be taught something of form, of color, of natural objects, whether of the animal or the vegetable kingdoms, and many other things of a kindred nature. I must not be understood as finding fault with our excellent corps of teachers, nor with the course of instruction they have adopted. They have done the best they could under the circumstances in which they have been placed, and I know none will rejoice more than will they, when properly constructed, properly furnished, properly heated, and properly ventilated school buildings shall have made a good system of graded schools possible.

It will be remembered that soon after entering upon the duties of my office, I expressed surprise that so few slates were found in the Primary Schools, and recommended their early introduction. This has been done with good results. The teachers have most cordially accepted whatever suggestions I have made in regard to their use, and to them belongs the credit of whatever has been accomplished in this direction.

The report of the sub-committee of one of the schools contains the following: "The slates which were introduced in the autumn,

have been diligently used. The pupils have been taught to print, write, make figures, and have advanced somewhat in the mysteries of written arithmetic. The interest which has been created by these new branches of study has been gratifying, and the progress made surprising and highly encouraging."

I would gladly speak at length of the condition of the High and Grammar Schools, but having so far exceeded the limits I had proposed for this Report, I shall defer a more extended notice to some future time. It is sufficient to say, that I regard the present condition of these schools as highly satisfactory, except so far as the Grammar Schools suffer from the evils of unfortunate school accommodations, to which I have already alluded, and all from other evils, which if not unavoidable, yet seem almost universal. Of this latter class non-attendance and tardiness are injuring the efficiency of the schools to a degree hardly appreciated by any.

It is generally supposed that all between the ages of five and fifteen are found in the schools, either public or private, excepting such as are prevented from attending by sickness or other sufficient cause. There were in the city May 1868, 7,306 children between the ages of five and fifteen. The average number belonging to the schools from March to December was 5,689; but of this number four hundred were above the age of fifteen, and should be deducted from the number just given; but since there are in private schools just about four hundred, we may suppose that the average number belonging to both the public and the private schools is very near the number first given — 5689, which is only seventy-seven per cent. of the whole number in the city. But this is not all; of *this* number only about nine-tenths are in daily attendance, so we have an average of 2186 children attending neither the public nor the private schools.

We must not be deceived by percentages, low as they are. When it is remembered that in so many instances children for the slightest cause, or for no cause whatever, are taken from school for weeks at a time, and when also it is remembered that pupils after one week's absence, though counting as enrolled members, do not affect the per cent. of attendance, it will readily be seen how it is possible that there should be such a discrepancy between the actual number in attendance, and the whole number belonging. We need a reform in this matter, and that at once. We are now

suffering more from furloughs granted by weak, indulgent, and mercenary parents, than we are from the deserters, for these are, in almost every instance, promptly brought back, and placed under proper discipline. We must not fail to appreciate the work in this regard of our efficient Truant Officers. Their activity, their watchfulness, their knowledge of individual circumstances, render their services invaluable.

Doubtless, if we would have an improved attendance, the teachers must make even a greater effort than ever before, but chiefly the work must be that of the parents themselves. They must remember that three months of unbroken attendance, is worth more than six months scattered through the year; they must believe that "it is a wretched economy which keeps any child under fifteen from attending school;" and they must feel, too, that the wrong they do their child is almost a crime to the State, which demands intelligence in its citizens.

Let there be a strong effort made to improve the attendance in all the grades of our schools.

The number of instances of tardiness in the schools is something frightful. In the High School and six of the Grammar Schools, for the three quarters of the year just passed, the whole number reported is 8,763; while the other Grammar School reports 800 for *one quarter*. Considering the remaining portion of the year as unfavorable in results as that already passed, we should have for these grades alone 13,953 instances of tardiness. In one of these schools there were but 86 cases in the four highest classes, and it is possible that other schools have an equally good record in the corresponding grades.

The following table shows the whole number of pupils in the schools from March to December, the average number belonging, and the per cent. of attendance. The number in the first column is large, since on account of promotions many are counted twice.

NUMBER OF PUPILS AND PER CENT. OF ATTENDANCE.

SCHOOL.	Whole number belonging.	Average number attending.	Per cent. of attendance.
High School	419	280	93.9
GRAMMAR SCHOOLS.			
Allston	773	526	92.5
Harvard	347	253	94.
Putnam	452	307	94.8
Shepard	360	225	92.
Thorndike	335	314	94.5
Washington	418	301	95.8
Webster	625	400	92.
PRIMARY SCHOOLS.			
Allston	80	50	94.6
Boardman	88	56	89.
Bridge	170	84	87.
City	55	36	95.8
Craigie	174	116	84.
Dana	163	109	86.
Dudley	237	148	88.
Dunster	261	198	91.
Eastern	128	108	88.2
Felton	191	129	90.
Gannett	270	163	93.
Harvard		75	89.
Lechmere	81	66	85.
Mason	269	180	91.
Otis	408	267	85.
Putnam	161	104	88.7
Quincy	149	111	88.
Sargent	302	197	88.8
Shepard	327	241	84.6
Thorndike	170	117	86.8
Washington	283	194	90.
Webster	290	220	89.
Williams' Hall	174	113	94.
SUMMARY.			
Grammar	3,310	2,326	93.7
Primary	4,431	3,082	88.6

In Chicago the percentage of attendance in the High School is 97; in the Grammar and Primary it is 96.4. In Boston in the High Schools 96.8; in the Grammar 94.3; in the Primary 91.3.

Evening Schools.

Three evening schools — one in each police district, — organized early in November, have from the first been highly successful. There are now connected with these schools, ten teachers and about four hundred pupils. Of the teachers it is sufficient to say that they are among the best belonging to our Grammar Schools. The pupils are, for the most part, those greatly needing the advantages thus afforded, and by their earnestness they show that they appreciate the privileges which they enjoy. I believe that separate evening schools for the two sexes, continuing five months in the year, should become a part of our regular school system.

In closing my Report, allow me to thank you for the kindness and sympathy which I have received from each member of your Board. If that kind charity which has thus far actuated Committee, teachers, and citizens shall be continued, I shall feel in the future, as in the past, that many of the greatest sources of anxiety are removed.

Respectfully submitted,

EDWIN B. HALE,

Superintendent of Public Schools.

GOVERNMENT

OF

THE CITY OF CAMBRIDGE.

1869.

MAYOR.

Hon. CHARLES H. SAUNDERS.

ALDERMEN.

JEREMIAH W. COVENEY,
HENRY O. HOUGHTON,
JOHN S. MARCH,
WILLIAM J. MARVIN,
ALPHEUS MEAD,
GEORGE W. PARK,
DANIEL R. SORTWELL,
JAMES H. SPARROW,
CHARLES F. WALCOTT,
WILLIAM WRIGHT.

ALDERMEN, BY WARDS.

Ward I. Aldermen Walcott and Wright.
Ward II. Aldermen March and Marvin.
Ward III. Aldermen Coveney and Sortwell.
Ward IV. Aldermen Houghton and Sparrow.
Ward V. Aldermen Mead and Park.

COMMON COUNCIL.

HENRY W. MUZZEY, *President.*

Ward I.

Charles C. Clapp,
Orrin W. Hall,
Henry W. Muzzey,
Samuel K. Williams, Jr.

Ward II.

Samuel P. Adams, Joseph H. Converse,
Alvaro Blodgett, James H. Hall,
Daniel H. Thurston.

Ward III.

George R. Brine, William G. Hill,
Watson B. Hastings, B. J. McCormic,
John McSorley.

Ward IV.

Leander Greely, Gustavus A. Smart,
James Richardson, Seymour B. Snow.

Ward V.

Noah M. Cofran, George W. Homer.

Clerk.

J. Warren Cotton.

CITY CLERK.

JUSTIN A. JACOBS.

CITY MESSENGER.

Roland Litchfield, Jr.

COMMITTEES OF THE CITY COUNCIL,

JOINT STANDING COMMITTEES.

ON FINANCE.

	COMMON COUNCIL.
The Mayor.	The President,
	Orrin Hall,
ALDERMEN.	Joseph H. Converse,
John S. March,	Watson B. Hastings,
Daniel R. Sortwell.	George W. Homer.

ON PUBLIC INSTRUCTION.

ALDERMEN.	COMMON COUNCIL.
Charles F. Walcott,	The President,
Henry O. Houghton.	James H. Hall,
	George W. Homer,
	Gustavus A. Smart.

ON ORDINANCES.

ALDERMEN.	COMMON COUNCIL.
John S. March,	Samuel P. Adams,
Charles F. Walcott.	Seymour B. Snow,
	Alvaro Blodgett.

ON ACCOUNTS.

ALDERMEN.	COMMON COUNCIL.
Henry O. Houghton,	Alvaro Blodgett,
William Wright.	Noah M. Cofran,
	William G. Hill.

ON PUBLIC PROPERTY.

ALDERMEN.	COMMON COUNCIL.
Daniel R. Sortwell,	Alvaro Blodgett,
James H. Sparrow.	Watson B. Hastings,
	Samuel K. Williams, Jr.

ON THE ALMSHOUSE.

ALDERMEN.	COMMON COUNCIL.
William J. Marvin,	Charles C. Clapp,
Alpheus Mead.	Daniel H. Thurston,
	B. J. McCormic.

ON ROADS AND BRIDGES.

ALDERMEN.	COMMON COUNCIL.
William Wright,	Daniel H. Thurston,
Alpheus Mead.	Noah M. Cofran,
	John McSorley.

ON RESERVOIRS AND DRAINS.

ALDERMEN.	COMMON COUNCIL.
Daniel R. Sortwell,	Leander Greely,
George W. Park.	B. J. McCormic,
	Samuel K. Williams, Jr.

ON FUEL.

ALDERMEN.	COMMON COUNCIL.
James H. Sparrow,	Noah M. Cofran,
Jeremiah W. Coveney.	Samuel P. Adams,
	William G. Hill.

ON LAMPS.

ALDERMEN.	COMMON COUNCIL.
George W. Park,	Gustavus A. Smart,
William J. Marvin.	Orrin Hall,
	Leander Greely.

ON WATERING STREETS.

ALDERMEN.	COMMON COUNCIL.
Jeremiah W. Coveney,	B. J. McCormic,
William Wright.	Charles C. Clapp,
	James Richardson.

ON PRINTING.

ALDERMAN.	COMMON COUNCIL.
Henry O. Houghton.	George R. Brine,
	James H. Hall.

ON THE FIRE DEPARTMENT.

ALDERMEN.	COMMON COUNCIL.
William J. Marvin,	Watson B. Hastings,
George W. Park.	Leander Greely,
	Orrin Hall.

ON CITY ENGINEERING.

ALDERMEN.	COMMON COUNCIL.
Alpheus Mead,	Joseph H. Converse,
John S. March.	James Richardson,
	Charles C. Clapp.

STANDING COMMITTEES OF THE BOARD OF MAYOR AND ALDERMEN.

ON POLICE.

The Mayor, Charles F. Walcott,
John S. March, Daniel R. Sortwell.

ON THE FIRE DEPARTMENT.

William J. Marvin, Jeremiah W. Coveney,
George W. Park.

ON ROADS AND BRIDGES.

William Wright, James H. Sparrow,
Alpheus Mead.

ON RESERVOIRS AND DRAINS.

Daniel R. Sortwell, William J.Marvin,
George W. Park.

ON LICENSES.

John S. March, Jeremiah W. Coveney,
James H. Sparrow.

ON HEALTH.

Henry O. Houghton, Alpheus Mead,
William Wright.

STANDING COMMITTEES OF THE COMMON COUNCIL.

ON ELECTIONS AND RETURNS.

Joseph H. Converse, George R. Brine,
James Richardson.

ON BILLS IN THE SECOND READING.

Charles C. Clapp, William G. Hill,
Samuel P. Adams.

ON ENROLLED ORDINANCES.

George W. Homer, Seymour B. Snow,
James H. Hall.

Assessors.

Levi L. Cushing, Jr.,
Artemas Z. Brown,
Andrew J. Green.

Assistant Assessors.

William Caldwell, Ozias Clark,
Rufus Lamson, John M. St. Clair,
James H. Cutter.

Auditor of Accounts.

Samuel P. Heywood.

Treasurer.

Joseph Whitney.

Collector of Taxes.

Joseph Whitney.

Measurers of Wood and Bark.

James H. Fuller, Francis H. White,
John R. Taylor, Benjamin J. Hoyt,
J. Henry Patch, Ivory P. Estes,
Dalphon Osborn, J. Henry Wyman.

Fence-Viewers.

George B. Lothrop, Abiel Goss,
Abel Stevens.

Field-Drivers.

Andrew Sproul, Benjamin F. Bridden,
Timothy Ames, Thomas Work,
Thomas D. Cook, Amori Benson, Jr.,
James S. Milliken, George A. Marston,
Abel A. Hildreth.

Pound-Keepers.

George W. Ames, Thomas D. Cook,
George A. Marston.

Fish Officers.

Thomas D. Cook, Joseph W. Averill,
Andrew Sproul.

Hay Weighers.

Otis H. Hendley, Ivory P. Estes,
William C. Brooks, Francis H. White,
Charles H. Titus, Joseph Burridge, Jr.,
Emerson W. Law.

Coal Weighers.

James F. Jefferds, George S. Graves,
Joseph Burridge, Jr., J. Henry Wyman,
William H. Raymond, William C. Brooks,
John Henry Patch, Emerson W. Law,
Thomas McIntire, Jr., George S. Wright,
William A. Hunnewell, Jones Valentine.

Weigher of Boilers and Heavy Machinery.

Joseph Burridge, Jr.

Sealer of Weights and Measures.

Enoch J. Howlett.

Inspector of Milk.

Enoch J. Howlett.

Surveyors of Mechanics' Work.

William S. Barbour, William A. Mason.

Inspector of Charcoal Baskets.

Enoch J. Howlett.

Measurer of Grain.

Enoch J. Howlett.

Auctioneers.

Samuel R. Knights, John L. Porter,
John C. Farnham, William A. Munroe,
Samuel C. Knights.

School Committee.

Charles H. Saunders, Mayor, *ex officio*, *Chairman*.

WARD I.

Francis Bowen, Morrill Wyman,
Alexander McKenzie.

WARD II.

Hamlin R. Harding, Edward Abbott,
Thomas Scully.

WARD III.

John W. Hammond, Grove H. Loomis,
Joseph H. Tyler.

WARD IV.

Edwin B. Chase, Asa P. Morse,
Henry O. Houghton.

WARD V.

John Fiske, James R. Morse,
David O. Mears.

SECRETARY.

W. W. Wellington.

Overseers of the Poor.

The Mayor, *ex officio*, *Chairman.*

Benjamin F. Wyeth, Joseph H. Rice,
Edward Kendall, Charles R. Patch,
Jacob L. Bailey, Lewis B. Guyer.

CLERK.

Benjamin F. Wyeth.

Warden of the Almshouse.

Joseph W. Averill.

Physician of the Almshouse.

James R. Morse, M. D.

Board of Engineers.

CHIEF ENGINEER.

GEORGE B. EATON.

ASSISTANT ENGINEERS.

First Assistant . . . . Thomas J. Casey.
Second Assistant . . . . Jacob A. Holt.
Third Assistant . . . . Joseph H. Marvin.
Fourth Assistant . . . . P. H. Raymond.

CLERK OF THE BOARD.

Joseph H. Marvin.

Board of Health.

The MAYOR and ALDERMEN.

Cambridge Cemetery.

COMMISSIONERS.

The Mayor, *ex officio*.

John C. Farnham,
Daniel U. Chamberlin,
George S. Saunders,
Z. L. Raymond,
Charles M. Hovey,
John M. Tyler.

SUPERINTENDENT.

James K. Farwell.

Superintendent of Burial Ground.

WARD I.

Benjamin F. Wyeth.

Undertakers.

Benjamin F. Wyeth,
Roland Litchfield,
John Pear,
Samuel F. Hunt,
William Casey,
C. Henry Lockhart,
Alvah A. Hadley,
Benjamin J. Hoyt,

Thomas Devens.

Police Court.

STANDING JUSTICE.

JOHN S. LADD.

SPECIAL JUSTICE.

Henry W. Muzzey.

CLERK.

Thomas McIntire, Jr.

Police Department.

CHIEF OF POLICE.

FORDYCE M. STIMSON.

PRINCIPAL CONSTABLES.

DISTRICT I.

Fordyce M. Stimson.

DISTRICT II.

William Twist.

DISTRICT III.

John L. Boynton.

CONSTABLES.

Fordyce M. Stimson,
William Twist,
John L. Boynton,
John C. Burdakin,
Thomas W. Frederickson,
Clark Moore,
Charles J. Adams,
James C. Nute,
James F. Jefferds,
Thomas Work,
Thomas McIntire, Jr.,
Frederick A. Lull,
Charles H. Hunnewell.

POLICEMEN.

DISTRICT I.

Timothy Ames,
Thomas D. Cook,
James B. Morse,
Micah W. Cook,
Andrew Sproul,
Kidder A. Livermore,
George A. Marston,
Benjamin Kennard,
Moses M. Child,
John S. Milliken,
Leonard Shackford,
Albert D. Cleveland.

DISTRICT II.

Benjamin F. Bridden,
Abel A. Hildreth,
George H. Copeland,
Daniel Sherman,
Charles L. Russell,
James H. Parks,
Frederick W. Hagar,
George Wood,
George S. Dudley,
Warner W. Simonds.

DISTRICT III.

Amori Benson, Jr.,
William Mullett,
Thomas D. Sanborn,
Henry Kinsley,
Moses W. Hooper,
Matthew R. Moore,
Amos Jones.

FIRE POLICE.

George S. Pike, Moses Ricker,
James M. Hilton.

TRUANT OFFICERS.

Fordyce M. Stimson, Benj. F. Bridden,
John L. Boynton, Moses M. Child,
Abel A. Hildreth, Thomas D. Cook,
Amori Benson, Jr.

SPECIAL POLICEMEN.

George B. Eaton,
Thomas J. Casey,
Jacob A. Holt,
Joseph H. Marvin,
Patrick H. Raymond,
Roland Litchfield,
Austin K. Jones,
John H. Marcy,
James Murray,
Samuel M. Frye,
Lucius A. Buck,
James F. Jefferds,
William Locklin,
Stephen E. Day,
George H. Capen,
Leonard Bacon,
Benjamin F. Livingston,
Joseph W. Averill,
James T. Sell,
J. J. Brown,
Thomas G. Bruce,
Roland Litchfield, Jr.,
James C. Nute,
Austin J. Coolidge,
Daniel L. Winsor,
Joseph G. Bicknell,
Albert E. Clark,
James C. Wilder,
Enoch J. Howlett,
Rufus S. Downe,
Thomas McIntire, Jr.,
Joseph Foss,
Robert C. Brown,
Hastings Gifford,
John Fuzzard,
Joseph S. Dolbeare,
Abner J. Osborn,
James K. Farwell,
Alvah Whitney,
Lorenzo Ritterbush.

Surveyors of Highways.

The same persons who compose the Board of Mayor and Aldermen.

City Engineer and Surveyor.

Josiah G. Chase.

Superintendent of Streets and Drains.

GEORGE L. CADE.

Superintendent of Lamps.

ROLAND LITCHFIELD.

Trustees of the Dana Library.

The Mayor, *ex officio*, *Chairman.*

ALDERMAN. COMMON COUNCIL.

John S. March. Gustavus A. Smart.

CITIZENS AT LARGE.

Charles Deane, Anson Hooker,
William W. Wellington, M. D.

LIBRARIAN.

Miss Caroline F. Orne.

Cambridge Water Board.

The Mayor, and President of the Common Council, *ex officio.*

Albion K. P. Welch, Samuel Slocomb,
John Sargent (President), Robert Douglass,
Chester W. Kingsley.

CLERK.

Justin A. Jacobs.

Superintendent of Water Works.

WILLIAM H. PRATT.

Water Registrar.

ABIEL F. FIFIELD.

Trustees of the Sanders Temperance Fund.

The Mayor, and President of the Common Council, *ex officio*.

ALDERMAN.
Henry O. Houghton.

COMMON COUNCIL.
James H. Hall,
Alvaro Blodgett.

Trustees of the Dowse Institute.

The Mayor, and President of the Common Council, *ex officio*.

Charles Deane, John C. Dodge,
William W. Wellington, M. D.

Representatives in General Court.

James R. Morse, Charles A. Fiske,
Asa P. Morse, Martin L. Smith,
Charles J. McIntire.

WARD OFFICERS.

Ward I.

WARDEN.
James H. Wyeth.

CLERK.
Robert Torry, Jr.

INSPECTORS.
Leonard Lyon,
Saml. E. Chamberlain,
Joseph Williams.

Ward II.

WARDEN.
Enoch J. Howlett,

CLERK.
James E. Hall.

INSPECTORS.
Charles R. Patch,
George C. Howlett,
Cicero C. Gale.

Ward III.

WARDEN.
Luther L. Parker.

CLERK.
Andrew Fogg.

INSPECTORS.
Charles E. Dennett,
William B. Savage,
William H. Brine.

Ward IV.

WARDEN.

Daniel D. Leeds.

CLERK.

John D. Robinson.

INSPECTORS.

Calvin C. Smith,
William A. Munroe,
Charles F. Swett.

Ward V.

WARDEN.

William J. Bryant.

CLERK.

Francis H. White.

INSPECTORS.

Warren Cutter,
Charles L. Fuller,
Russell S. Edwards.

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